THE BROOKINGS INSTITUTION

TRAINING AMERICA'S WORKFORCE FOR THE FUTURE:

NEW POLICIES TO BOOST EMPLOYMENT AND WAGES

A HAMILTON PROJECT POLICY DISCUSSION

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ANDERSON COURT REPORTING
706 Duke Street, Suite 100
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190

PARTICIPANTS:

WELCOME AND ANNOUNCEMENT OF 2011 HAMILTON PROJECT POLICY INNOVATION PRIZE WINNER:

ROBERT E. RUBIN
Co-Chair, Council on Foreign Relations
Former U.S. Treasury Secretary

MODERATED DISCUSSION: HUMAN CAPITAL, ECONOMIC GROWTH, AND JOB CREATION IN THE NEW MILLENNIUM:

Moderator:

ROBERT E. RUBIN
Co-Chair, Council on Foreign Relations
Former U.S. Treasury Secretary

Speaker:

ALAN B. KRUEGER
Chairman
White House Council of Economic Advisers

ROUNDTABLE: CREATING MORE EFFECTIVE EDUCATION AND WORKFORCE DEVELOPMENT SYSTEMS IN THE STATES:

Moderator:

MICHAEL GREENSTONE
Senior Fellow and Director, The Hamilton Project
The Brookings Institution

Author:

HARRY HOLZER
Professor of Public Policy
Georgetown University

PARTICIPANTS (CONT'D):

Discussants:

RHANDI BERTH
Vice President
Wisconsin Regional Training Partnership

MAUREEN CONWAY
Executive Director, Economic Opportunities Program
The Aspen Institute

STEVEN VanAUSDLE
President
Walla Walla Community College

ROUNDTABLE: OPPORTUNITIES TO REDUCE DISPLACED WORKERS' EARNINGS LOSSES THROUGH RETRAINING:

Moderator:

MICHAEL GREENSTONE
Senior Fellow and Director, The Hamilton Project
The Brookings Institution

Author:

LOUIS JACOBSON
President
New Horizons Economic Research

Discussants:

RHANDI BERTH
Vice President
Wisconsin Regional Training Partnership

DANIEL MARSCHALL
Legislative and Policy Specialist for Workforce Issues
AFL-CIO

PARTICIPANTS (CONT'D):

STEVEN VanAUSDLE
President
Walla Walla Community College

Remarks:

THE HONORABLE PATTY MURRAY (D-WA)
United States Senate

MODERATED DISCUSSION: APPRENTICESHIPS AND TRAINING FOR AMERICA'S JOBS OF THE FUTURE:

Moderator:

ROGER C. ALTMAN
Founder and Chairman
Evercore Partners

Speaker:

ERIC A. SPIEGEL
President and Chief Executive Officer, Siemens Corporation and Chief Executive Officer of the U.S. Region

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P R O C E E D I N G S

MR. RUBIN: I'm Bob Rubin and on behalf of all my colleagues at the Hamilton Project, I welcome you to today's event. Our discussion, as you know, is entitled "Training America's Workforce for the Future: New Policies to Boost Employment and Wages."

We began the Hamilton Project about six years ago and it really, I think, provides distinctive perspective with respect to policy issues because it is an unusual, I think maybe even unique, combination of analysts, academics, financial people, and people who are involved politically, not in elected office but political analysts. And they form the advisory council. The advisory council in turn provides guidance for what is a membership organization. We don't endorse specific ideas but what we do is we bring the academics of policymakers from around the country to provide worthwhile ideas and then we subject those proposals to rigorous peer review. Our budget is divided 50/50 between policy development and dissemination or promulgation, and the overall objective is to foster economic development -- serious economic development and also to develop seriousness of purpose to the extent that we can in public debate and in governance. And those purposes seem especially important to us at the present time when so much of the public debate and so much of the discussion, our governing processes, seems to us highly distressing when the political system itself is so often dysfunctional and when our country faces such enormous challenges, both for the short term and the long term.

We believe that economic policy should promote growth, broad-based participation in that growth and economic security, and all three of those objectives can be mutually reinforcing. We also believe in a market-based economy but we believe equally in a strong government to provide functions that markets by their very nature cannot provide, particularly public investment and regulation.

The hardship that many Americans have been experiencing and are experiencing and the likelihood that difficult economic conditions are likely to continue for some time calls for a serious commitment to governance and a serious commitment to sound action. The Hamilton Project has convened in the relations on matters relating to the short-term duress, particular on mortgages and on stimulus. However, our primary focus is the long term. With respect to the long term, we believe that our country has enormous strengths -- the dynamism of our culture, our entrepreneurial spirit and much else -- which positions the United States for a successful economy over time. But to realize that potential we have to reuse consequential challenges, sound fiscal conditions, vigorous public investment, and reform in many areas that are key to our economy.

And that takes us to today's program. Our country's current economic duress, the rapid changes in the global economy, and the unmet needs of America's poor, make effective training to meet the different needs of the disadvantaged on the hand and dislocated experienced workers on the other absolutely critical, both for the workers and also to have a successful economy for all of our citizens.

Two developments have been key with respect to heightening this need for training. Number one, conventional opportunities for disadvantaged workers have declined in labor-intensive manufacturing due to globalization and technology. And number two, the rapidity of change has increased the rate of dislocation for experienced workers. And that was true even when just unemployment was at relatively low levels.

President Clinton once said in an economic speech in the East Room of the White House, that we cannot and should not try to prevent change, but that the American people must be equipped to deal with change. And that is the spirit that animates today's Hamilton Project program. Your materials contain a strategy paper -- the Hamilton Project strategy paper on training. It distinguishes -- I said a moment ago -- between the needs of the disadvantaged and the needs of dislocated experienced workers. And it sets forth principles based on extensive research that has been done in this area of training. That includes many studies of actual programs from which lessons can be learned.

With that I'll outline our program for today and briefly introduce our speakers and panel members. When you look at the program you'll see it's really a truly outstanding group, but I won't go into their resumes since they are in your materials.

We begin the discussion on human capital, economic growth, and job creation in the new millennium. That's for the whole thousand years that we may limit ourselves; for some, a brief period. (Laughter) The discussion will be Alan Krueger, who is certainly capable of looking at a thousand shares but again, I think we'll ask Alan to have a somewhat shorter time horizon. Alan, as you know, is the new chairman of the Council of Economic Advisors in the White House. I first got to know Alan when he was the assistant secretary of labor in the Clinton administration. Alan has since served as the assistant secretary of Treasury in the current administration and was the Bendheim professor of Economic Policy and Public Affairs at Princeton University. In our administration, Alan contributed enormously to the intellectual life of our administration and to policy deliberation. And I know the same has been true in this administration.

The first roundtable entitled "Creating More-Effective Education and Workforce Development in the States" will start with a presentation by Harry Holzer, professor of public policy, Georgetown University. He'll be presenting his paper that won this year's Hamilton Prize and we'll get back to that in a moment. The discussants will be Rhandi Berth, vice president, Wisconsin Regional Training Partnership; Maureen Conway, executive director, Economic Opportunities Program, the Aspen Institute; and Steven VanAusdle, president, Walla Walla Community College. The moderator will be Michael Greenstone, director of the Hamilton Project, senior fellow at the Brookings Institution, and tenured professor at MIT.

The second roundtable, entitled

"Opportunities to Reduce Displaced Workers' Earnings Losses through Retraining" will start with the presentation of a paper by Louis Jacobson, president, New Horizons Economic Research. Discussants will be Rhandi Berth, who I've already introduced; Daniel Marschall, legislative and policy specialist for workforce issues in the AFL/CIO; and Steven VanAusdle, whom I've already introduced. The moderator will be Michael Greenstone.

Then we'll turn to remarks by Patty Murray. Senator Patty Murray, chairman of the Subcommittee on Employment and Workplace Safety for the Senate Help Committee. She has been a strong leader in the Senate on these issues, the issues of worker training. And we are very grateful for her joining us and her remarks I'm sure will help inform the rest of our discussion.

We'll conclude the moderated discussion entitled "Apprenticeships and Training for America's Jobs of the Future." The discussant will be Eric Spiegel, president and CEO, Siemens Corporation, and

CEO of the U.S. region. The focus of that will, to some extent, be the practices in Germany which as you know has a very advanced approach to training and Siemens Corporation is bringing those practices into the United States. The moderator will be Roger Altman, founder and chairman of Evercore Partners, former deputy secretary of the Treasury, and member of our advisory council.

Finally, let me thank three people for developing the intellectual construct of what is really an extremely interesting program and then for bringing together such outstanding participants -- Michael Greenstone, the director of our project; Karen Anderson, managing director of the Hamilton Project, installed throughout our existence; and Adam Looney, policy director of the Hamilton Project and senior fellow at the Brookings Institute.

Let me also say the Hamilton Project had a very small staff but really extraordinary good people. They are very hard-working and everything we do is a product of their work. Before we proceed, let me go back to the Hamilton Project prize that I mentioned before. Harry, if you would come to the podium, and Michael, you're around someplace. Yeah, there we go. Okay, Michael, come.

Every year we present one Hamilton Project prize for a paper. In this case the competition called for regional research on job creation and productivity. We opened the competition to professionals around the country. We had many submissions. We judged them on the basis of innovativeness, strength of analysis, rigor, soundless of cost benefit analysis, projected gains from employment and productivity, and then they're taking into account the realities of federal and state budgets.

The winning paper is "Raising Job Quality and Skills for American Workers: Creating More Effective Education and Workforce Development Systems in the States," by Harry Holzer, who I have already introduced, professor of public policy at Georgetown University. In the paper that Harry has produced, as

I mentioned a moment ago, will be the subject of one of our panels.

With that, Harry, I present you with a plaque. Congratulations.

(Applause)

MR. RUBIN: Okay. Now what we're going to do is we are going to turn to the extraordinarily attractive appetizer we have for our program, Alan Krueger. Alan, if you'll come to the stand we'll begin our discussion.

Okay. We are now going to have, as the program indicates, a half-hour discussion with Alan about training, the subject of training in labor economics, Alan's professional field. But I think it would be malpractice to have the chairman of the Council of Economic Advisors with us and not start with one question on the economy, if I may.

If you take a look at 2012, we have economic duress. And we would have to guess and no matter what happened, at the very least it's going to be a troubled and uncertain arena next year. Even China may now be slowing down a little bit. With all of that and actually taking a new job, what is your outlook for 2012? And whatever that outlook may be, what do you think with respect to economic policy, we should be doing to address that outlook?

MR. KRUEGER: Thanks, Bob. It's a real pleasure for me to be here. People often ask how does my current day job compare to what I did most of my career. And I think the biggest difference is I'm now more of a consumer of research than a producer of research and a big consumer of the research that the Hamilton Project has been supporting. So I wanted to start by just encouraging your efforts, praising the work that's been done. I remember 10 years ago I spoke at, I think, the launch meeting of the Hamilton Project on inequality at that time.

SPEAKER: We still have it.

MR. KRUEGER: It still is a problem that contributed to the crisis that we had. And in my current role we benefit enormously from the work that the Hamilton Project has done. And I thought your description of the project really wasn’t true the way I see the way it works.

So to address your question, as you know, we have an extremely deep economic crisis, unlike other economic crises we’ve seen since the Great Depression. But I think the recovery that we’re having, although we have been having economic growth for nine quarters, has proceeded at a moderate pace in large part because of the legacy of the problems that led to the crisis. So you look at the headwinds -- and you identified many of them -- that the economy is currently facing. National construction is very weak. I think you can trace that to the housing boom and the overproduction of housing that we had. Consumption has been -- consumption growth has been moderate, particularly in services. And most of the jobs are in services. Services consumption accounts for around half of GDP, lower than half of jobs. And consumption of goods consumption has bounced back reasonably well given the size of the problems I think that we face. But services consumption has been slower. And I think that that's related to deleveraging and families feeling that we are in an uncertain time, paying off debt and being cautious. And then the third major headwind has been state and local governments, which have been laying off 20,000-25,000 workers a month once the Recovery Act support that they got started to phase out.

So I don't want to give a precise prediction about economic growth next year. As you know, we do this twice a year, part of the troika process. But I do think we are at a point where if Congress doesn't act on the president's proposals to strengthen the economy in the near term it could certainly have significant macroeconomic effects. And I think most importantly this week is the payroll tax cut extending and expanding the payroll tax cut which the president proposed in the American Jobs Act. If we don't extend the payroll tax cut, that would mean $1,000 tax increase for a typical family earning $50,000 a year. The president proposed expanding it to 3.1 percent tax cut, which would be a $1,500 tax cut increase after-tax disposal income for families. That would provide, I think, a lot of support for the economy next year.

And extended unemployment benefits as well. The unemployment rate is still much too high. The CBO has concluded that unemployment benefits have a lot of bang for the buck in terms of the unemployed spending money supporting the rest of the economy. And with the potential headwinds from Europe which you mentioned, that could -- one of the avenues in which that could affect us is through exports. Aggregate demand is already weak, so looking at ways to try to support aggregate demand make a lot of sense in the short run. And then I think as you have stressed throughout your career is getting on a sustainable fiscal path. I think we need to do two things at once. We need to strengthen the economy in the short run, raise growth, faster job creation, and at the same time I think we need to get on a sustainable fiscal path. I think we are capable of doing two things at once and I think they complement each other.

MR. RUBIN: Thank you, Alan. For those of you who are Keynesians, I would remind you exactly as Alan said. Keynesians refer not only stimulus but also to animal spirits and I think that as you say, Alan, if we could re-establish fiscal rectitude at the same time and defer the implementation for a couple of years, I think we'd do ourselves a lot of good.

When you pull all this together, Alan -- I don't know the number but there's a fiscal drag people say, about 2 percent of GDP for 2012 -- if you take the president's full Jobs Act program, how much of that 2 percent or does it make up more? What does it do in terms of GDP?

MR. KRUEGER: You know, the estimates that are out there are in the range that the fiscal drag that we're facing because of the fade out of the extent of unemployment benefits, the payout of the Recovery Act, then the expiration of the payroll tax cut if it's not extended, are probably in the range that you said, 1-1/2 to 2 percent of GDP. The Jobs Act, which I think is really well targeted to the problems that we're facing, in addition to the payroll tax cut and extended benefits, also investing in infrastructure where we have, I think, a long-term need, and support to help state and local governments retain teachers and first responders where we've been seeing a lot of layoffs, I think the estimate are that that would pretty much counteract the drag that we would otherwise be seeing.

And then you have the natural healing going on in the economy. I mean, people, I think, tend to forget because the crisis was so deep. We have had nine quarters of growth. We've had 20 months in a row of private sector job growth. So the natural process of healing in the economy is taking place; it's just taking place too slowly and I think it's most important that we sustain that recovery, that we can get on a path that is more of a virtuous cycle, which is feeding on itself.

MR. RUBIN: Alan, let's talk training for a moment. You spent your academic career in this world. I remember when I was in office, and I think it's still true. There are a lot of mixed views about the effectiveness of training, but then I think there's been a fair -- at least I gather there's been a fair, but a more recent research that spoke about particular programs. Is there anything you could tell us about that? And maybe in the process of that, distinguish between the issues that are faced in training, the disadvantaged, the poor, the urban poor mostly I guess, but the poor, and dislocated experienced workers?

MR. KRUEGER: Sure.

MR. RUBIN: Let me just ask -- I don't mean ask -- and so in that whole context, if you were going to allocate a federal budget and expect the training, what are the areas you would look at?

MR. KRUEGER: Well, I should say I learned a lot from reading the paper by Michael Greenstone and Adam Looney, so this is an example of me being a consumer of research. And I think training is an area where we do know a great deal. One of the reasons is if you go back to the 1970s, the efforts of labor economists at the Labor Department, like my colleague from Princeton, Orley Ashenfelter, to start a serious program to evaluate training programs. And to use the standard methods of econometrics but also to try to do randomized experiments, to use the same kind of methods that are used, say, in the medical sciences. So it's an area where we've learned a lot and we continue to learn a lot.

I think the general wisdom is that training programs tend to have a rate of return which are similar to the rate of return of investing in education more generally, but there's a lot of diversity across the programs and also a lot of diversity across groups that are being served. And before I actually read through the paper by Greenstone and Looney, I was prepared to say one area where we've had tremendous challenge in finding programs that are effective is for youth training. Disadvantaged youth in particular are a group in tremendous need of support in the job market. They face multiple disadvantages and I think that's one of the reasons why training programs sometimes haven't succeeded for that population. Many of the early evaluations under JTPA, for example, of youth training were very discouraging in terms of having lasting effects.

I think there are now more models out there, and one of the things I took away from the Greenstone and Looney paper is that there are more successful models out there in addition to Job Corps, which we can talk about in more detail later on, which suggests that there are some things we can learn to help the population of disadvantaged youth. So I'll return to that in a moment.

For displaced workers, what I think the literature shows is that if people are receiving training in fields that are in relatively high demand in the job market that has significant payoffs for society as well as those going through the training. But it's important to tailor the training that they receive to the needs in the job market and the individuals' backgrounds. For older workers, labor economists would be concerned that training is an expensive upfront investment and older worker are not going to have as long a horizon in the job market, so perhaps training is not the best solution for that type of a population.

For workers returning to the job market who hadn't worked in a while, or for those who had long careers and haven't searched for a job in a while, job search assistance seems to be very effective. The lost cost intervention. And I think particularly for the long-term unemployed how, job search assistance can be helpful because the longer people are unemployed, it tends to have a discouraging effect. And I think it's very important that we keep the long-term employed engaged in the job market.

MR. RUBIN: Alan, do you know -- I used to know a little bit about this just because I was there. It was a long time ago now. There used to be a fair bit of money devoted -- not what there should have been but a fair amount devoted to training. But it looked like it was misallocated to a fair degree. I don't know if that's still the case, but if you could reallocate, where would you reallocate? And does reallocation have to be done through Congress or can you do it on the executive branch?

MR. KRUEGER: So if you go back actually to the early '90s, we faced the exact same question. And you'll probably remember it. Larry Katz and I, when we were at the Labor Department, put together a report called "What's Working and What's Not in Employment Training." It had a very nice navy blue cover. I remember it well. And what we tried to do then was kind of a forerunner of this paper, is to sift through the literature and say which training programs have been effective? Can we allocate our scarce dollars in the direction of programs that are more effective? And in areas where we haven't been effective, can we devote resources to do research and try to learn what models would work? And I think that's taking place to some extent. And you can see this in one of the charts in this paper. There has been a reduction in the dollars allocated to the youth training programs. That took place in the mid-'90s, late-'90s. Some of that has been restored. I think as we learn more about what works in that area it would be important to shift resources on the margin in that direction.

I think we also learned that certain types of training are more effective than others, particularly, you know, different types of fields. So there was some attempt to shift in that direction. I think we can do a better job evaluating training providers. We could do a better job providing information to the trainees so they can make more sensible choices.

On how much can be done administratively without congressional action, I'm actually not the best person to ask. My sense is that it is probably fairly limited in how those dollars can be moved around.

MR. RUBIN: That would have been mine as well.

You mentioned Job Corps. You wouldn't remember this but I do remember it. You and Larry Katz once said to me that that was an example of a program that really worked on the one hand but it was very expensive on the other hand. Why don't you expand on that? Also, I don't remember now what you said about this but on a cost-benefit basis, is that -- take all those things into consideration. Is that a model for programs that we should be thinking about for the disadvantaged?

MR. KRUEGER: Right. So Job Corps is a program for youth. Age 16-24 I think is the range of participants. And since Larry and I had that conversation with you, the field of economics has learned more about Job Corps because the Labor Department and Mathematica Policy Research did a major study where 16,000 applicants to the Job Corps program were randomly assigned to participate in the program or serve in a controlled group. Since the program was oversubscribed you could say that this was a fair way of allocating participation anyway. And this was, I think, probably the best research that's been done on the Job Corps program. And I think to some extent it confirms what Larry and I told you, and to some extent it raises puzzles. So what the initial studies found was that the payoff from the Job Corps program was pretty high. That if you were to do a rate of return calculation -- I used to say it was more like the bond market than the stock market, although I probably should update that. Maybe shy away from that. Maybe shy away from that comparison. The rate of return looked like a similar rate of return to other investments in the education system, put it that way. And it looked like the program worked sort of across the board.

And one of the things that Larry and I used to believe was that one reason why Job Corps was effective was it was such an intensive program. It took people out of their neighborhoods, sent them to residential training centers. That’s true of about 90 percent of the participants. About 10 percent actually stay in their location. And it tends to be allocated in a way that individuals who would find it hard to relocate for 10 months to go through the program can stay in their own area. For example, a single parent with a child who needs family around to help take care of the child.

What the Job Corps study found was that both the residential and nonresidential centers were effective for the populations they were serving. So I think that was a new piece of knowledge. Mathematica continued to do the evaluation after the initial round. The initial work looked at self-reported survey data, which is common in this area. They also collected administrative earnings data, and that's what yielded a puzzle. So the earnings gain was in the neighborhood of 10 percent with the self-reported earnings data. With the administrative data it was still positive but considerably lower. And I have to say of the puzzle why it was so different, and you can think of different hypotheses for why the tax records would show something different than self-reported earnings.

The group, however, where the results were fairly unambiguous was the older participants, 21-24 year olds or 20-24 year olds. There, both the administrative records, as well as self-reported, point at the fairly high earnings gains as a result of participation in the Job Corps program. And there have been some other training evaluations where for the older populations you see that same kind of correspondence was self-reported and tax data.

So one of the things I'm more confident about now is that Job Corps seems to be a particularly effective model for the population age 20-24. For the younger group we have more of a puzzle than we had before as a result of the research, and some effort has been devoted to try to figure out which of these sources should one put more weight on, and I don't think that's been fully resolved.

MR. RUBIN: Alan, when people look at these different programs for the Job Corps, whatever else it be, do they try to bring some kind of rigorous cost benefit analysis to making the judgments and to understanding these programs?

MR. KRUEGER: Yes. Absolutely. I think this is in some sense a model. And I've only been focusing on part of the benefit. Part of the benefit is the earnings gain for the participants. I think that's a very important benefit. But there are other benefits as well. So the Job Corps evaluation, for example, found that utilization of welfare programs declined. There were some beneficial effects on reduction in serious crime and that's what the earlier literature showed as well. And it's a challenge for economists to pull together all the benefits and compare them to the cost but that's very much what the end goal of this analysis is.

MR. RUBIN: You know, that does raise an interesting question because as you say the direct benefits as you can see and compensation, then there were all these other benefits reducing social cost. As chairman of the CEA, is there a way that you can bring your capacity to bear on doing similar analysis for the full range of federal training programs so that you could reallocate to where there's a better cost benefit?

MR. KRUEGER: Well, CEA tries to do this

across the range of programs. As you know, not only training programs. And OIRA, when it looks at regulations, also tries to use the same framework of benefit cost analysis. This is an area where, you know, CEA and others in the administration, the DPC, NEC, Labor Department, are actively involved in looking at what modes of training have been effective, how can we, as you said, allocate dollars so we get the best return for the taxpayers. And also modify the programs to take the programs, use the knowledge we found about what works.

I'll give you an example. One of the things that we've learned over this long period of time is that training programs, particularly for youth that are, I would call it contextual learning -- I think the report called it sectoral programs -- where it's not just abstract learning math. My wife is a geometry teacher and it's not just, you know, my wife teaching a carpenter or someone who wants to be a carpenter, you know, how to minimize their waste by learning geometry. It's specifically, you know, hands-on, learning the skills, whatever they are -- plumbing, nursing aid, carpentry -- together with the more abstract classroom training. That it's the combination of those that works. Trying to import that model more to the youth programs is something I think that the research suggests can be a more effective use of taxpayer dollars.

MR. RUBIN: You know, you raise an interesting question because as you said, it's not only you all looking at training but all these others areas. As you think of the future and you look at the rapid changes in the economy, the things I mentioned before, the unmet needs of the poor and so on, where does training sort of stack up do you think in terms -- are there are going to be certainly scarce budget dollars no matter what happens -- where do you think of training as stacking up in the list of priorities or what's important?

MR. KRUEGER: I think training is extremely important. I mean, the president often says that it's not enough just to dig our way out of this crisis; we need to build a stronger foundation for the future. And he lists training education as an extremely important pillar of that new foundation. And, you know, from the perspective of the Hamilton Project, trying to emphasize shared prosperity and supporting growth, I think education and training is extremely high on the list, together with innovation and entrepreneurship. But I think we also have to recognize that the government budget is extremely tight. Government training dollars compared to all education training is relatively modest. Where it's less modest is for the disadvantaged. If you look at, say, all the training that takes place at companies, all of the on-the-job training that takes place, much of that is targeted to higher skilled workers to higher income workers where the federal government I think plays a relatively much larger role is for training for the disadvantaged. And I think we need to think more about leveraging what we learn from public sector training programs to help the private sector -- what models have worked in the public sector training that we can then transport to the private sector.

MR. RUBIN: Well, that leads me into another question where I'm going to go anyway, which is this. What role do you think the private sector has to play? And as you respond to that, I think a little bit of Germany is a model. Not necessarily a model but the practice today, which I gather are reasonably robust and successful.

MR. KRUEGER: The private sector plays many roles in training. They, for one thing, the private sector provides a lot of training in the for-profit training area, also non-profit training area. Private employers provide a tremendous amount of on-the-job training. More directly, partnering with the public sector there are the workforce investment boards which were part of WIA where private employers, together with other groups, provide direction for local training. And I think private sector has a tremendous amount of insight about what skills would be in demand. I think one needs to be careful to make sure that it doesn’t -- that the system doesn’t evolve to a point where a group in a particular industry is directing training dollars just to support that industry rather than thinking more broadly about the needs in the whole area. But the private sector, I think, can provide very important input in terms of guiding the public sector training that’s provided. And I think that does take place.

MR. RUBIN: Do the labor unions play a major role in that as well?

MR. KRUEGER: They’re also part of the workforce investment boards and labor, you know, depending upon the sector, labor unions have historically provided some training as well.

MR. RUBIN: When you look abroad, whether it be Germany or elsewhere, are there practices that we should be learning? Or are there lessons that we should learn from elsewhere?

MR. KRUEGER: Right. Right. I think one area where we can learn more from abroad is how to improve our school-to-work transition. The group with the highest unemployment rate in the U.S., recent high school graduates or recent school leavers, to put it that way. And we have kind of a messy process whereby students leave school and try to connect with employers. I think we can learn more from abroad on that. But I also think we have to look at our own unique structure. So for example, Bob, one of the things we have which I think a big advantage for the U.S. in terms of training compared to other countries is a widespread community college network. And we've tried to build on that. One of the policies that were implemented during the economic crisis, very quietly, kind of under the radar screen, was to make it possible for individuals who are on unemployment insurance to apply to community colleges or other trainers, receive Pell Grants. With extended unemployment benefits it actually provides a platform for individuals to get a serious amount of training with support from Pell Grants, and then be much more prepared for the jobs of the future. Because, as you know, the nature of employment is changing. We're shifting much more to higher skilled workers. So to help people make a transition. And that took advantage of our community college network, which I think is a unique attribute for the U.S.

MR. RUBIN: Actually, that's interesting. I had not heard of that. And this Pell Grant proposal actually passed?

MR. KRUEGER: You know, what was interesting, that was something that could have been done administratively. And former Hamilton Project director, Peter Orszag, when he was OMB director, was pivotal in giving guidance about how certain income is counted towards Pell Grants.

MR. RUBIN: Alan, and this may relate to some comments you made already, but one of the -- as you know far better than I do -- one of the serious problems we have now is long-term unemployed. So that's one problem. On the other hand, my impression, I see a lot of people who run businesses, is there really is a skills gap. That there really are a lot of unfilled jobs. I don't know about a lot but there are a reasonable number of unfilled jobs simply because they can't find people with requisite skills. How do you reconcile those? How do we develop ways of addressing the long-term unemployed and the skills gap together?

MR. KRUEGER: That's an excellent question. And I think --

MR. RUBIN: That's the first one that was excellent?

MR. KRUEGER: No.

MR. RUBIN: I was just curious. That's the only one you chose to label that way.

MR. KRUEGER: That was an excellent question because it seems -- it's the type of question which I think a lot of people ask because when we look at -- they can see data. There are vacancies and it's a good thing that job openings have been increasing. Yet, the number of applicants per vacancy is still extremely high. About four -- a little over four unemployed workers for every job opening right now. And I think the first order of story about what's going on in the job market is that unemployment is very high because of -- for cyclical reasons because of the financial and economic crisis that followed. That's the main reason why long-term unemployment is as high as it is.

At the same time, I do believe that we've had structural problem in the job market that preceded the economic crisis and is continuing. And that's why I think it's important that training be part of this new foundation going forward. If you look at the 2000s, at what happened to job growth, we never returned to the share of population working in the 2000s as where we were in 1999. So we had a jobs deficit before the recession started. Part of that I think is because of the skills deficit. If we look around at other countries that were successful in terms of creating jobs for their expanding population in the 2000s, like Canada, I think they did a much better job raising the skills of the workforce.

So I think that primarily our problems are cyclical and we need to raise demand, but at the same time we need to address mismatches that we have in various industries. So that's one of the reasons why I think training is such an important component of policy going forward.

MR. RUBIN: Alan, that's terrific. I've just been told that time is up but I'm still going to ask you just one more question if I may, that notwithstanding. I mean, you obviously know just an enormous amount about this area and this is an area of tremendous importance to our future. As chairman of the CEA, would you have both the time and also the opportunity to take this extraordinary ability and knowledge that you have and apply it to try to move this agenda in a special way?

MR. KRUEGER: Another excellent question. (Laughter)

I've been on the job almost a month now as chairman and I have to say I have been very pleased by the way that the economic team works. And for me with the background I have, having been at the Labor Department and at Treasury, there is a lot of opportunity for the CEA to work together with the entire administration on these issues, and you know, keep the work coming from the Hamilton Project. We read it closely and we benefit from it. And it helps to inform the deliberations that we have.

MR. RUBIN: Alan, thank you very much. The country is lucky to have you.

(Applause)

MR. GREENSTONE: All right. I think we're ready to get started with our first panel. And I thought before turning the floor over to Harry I would just make a couple of quick observations.

So I think American history has really had a remarkable feature as its centerpiece. And I think that centerpiece has been that each generation of citizens has done better than the previous one in terms of living standards. And I think that -- this growth of living standards has been fueled by two self-reinforcing trends. The one is an openness to technological change, new ideas, free trade and really just a wide variety of elements of change. And the second has been a workforce that's continuously upgraded its skills and has been able to handle this change and thrive in this change and facilitate this change.

And I think the reason we're here today is because worker training is a crucial element of this dynamic and because the last few decades have seen some cracks in this virtuous circle. And indeed, I think failure to continue to increase the skills of our workforce in one way or another can threaten the change that's kind of part of the underpinnings of the dynamism of the American economy.

And so I thought I would just try to illustrate some of the challenges with a couple of facts that appear in our Hamilton Project strategy paper. And a couple of them were surprising at least to me when we uncovered them. Over the last four decades many Americans have not been able to participate in the prosperity that the country has had as a whole. A couple of statistics illustrate that. If you just take men between the ages of 25 and 64, their earnings have actually declined by 28 percent over this four decades. It's a remarkable decline. It puts men's earnings back at the levels of the 1950s. And I guess not surprisingly at the same time, men have been increasingly withdrawing from the labor force and there's been, in fact, a 12 percentage point increase in the share of men not working.

And to the point of today, for high school graduates, people who only have a high school degree, these numbers are starker even. There's been a 47 percent decline in their earnings. Basically, their earnings have been halved in a four-decade period. I don't think there's ever been a period like that in American history. They've withdrawn from the labor force at an increasing rate as well with an 18 percentage point decline.

And at the same time, this kind of virtuous circle that requires an upgrade of skills has not worked quite as well, at least for some segments of American society. Educational attainment has stagnated. Certainly for men, graduation rates maybe even declined and college completion rates are flat. On the other side, of course, as my wife constantly tells me, women have done much better and are really the hallmark of our household in Chambers, Massachusetts, the nation. But I think the statistics about men reflect some broader forces of things that aren't working very well. And of course, the Great Recession has brought a lot of this into sharp relief and a couple of other statistics that have come out of that is during the Great Recession, seven million people, men and women, lost long-term jobs, and the economic research on that is pretty clear. On average, those people can expect to lose about $112,000 of earnings over the remainder of their career. So if you added that up, $800 trillion of, I guess, drag on GDP in the coming years. And it's also associated with a series of other nasty things -- higher mortality rates, reduced outcomes for their children.

So it's against this backdrop long-run earnings declined for many Americans and really large scale displacement associated with the recession that we thought part was part of the reason the Hamilton Project has been so focused on education. Our previous event about a month and a half ago was on the K-12 system, and today we want to have a conversation about job training, which is a crucial component of, you know, the underpinnings of increasing the skills of Americans.

So with that I thought I've taken enough time with this set of experts and we should let Harry start us off. And Bob introduced him a few minutes ago. Harry is an esteemed professor at Georgetown University School of Public Policy. What I like to think about Gary is within the discipline of economics, labor economics has gone into and out of favor at various points. But Harry is a labor economist's labor economist. (Laughter) He will be there in the popular moments and he's just as loud as when no one wants to hear from the labor economist.

MR. HOLZER: Thank you, Michael. And thanks to the entire Hamilton team for bringing us all together and highlighting this very important set of issues. As you can see, it's about the quality of jobs and the quality of workers and the skills to fill those jobs in the U.S. and how they can create more effective education and workforce systems.

I'm going to start with the job side before looking at workers and skills, because clearly we have a jobs crisis in the U.S. that other speakers have already talked about today. A lot of that discussion focuses on the quantity of jobs where there is, relative to the potential labor force, I think, it's still something like a 10 million job shortfall. It's going to take a long time to climb out of that hole.

But today I'm going to focus more on the quality of jobs which I think is more of a long-term issue and that we want to stay focused on as well. Now, as soon as you start talking about the quality of jobs people start asking the question, well, is the issue really the quality of jobs or the quality of workers? And really, economists have been debating this for decades really using different techniques to feel that out. And of course, my belief, and I think many of yours as well, means that both of them matter importantly.

On the one hand I think jobs do matter independently of workers and employers make choices about what kind of human resource policies they want to institute, even in the same industry and area. You see a wide range of choices made and there's a shorthand for this. People call this the high road and the low road. In competitive industries you compete purely on the basis of low costs and low labor costs or on the higher road where you invest in the productivity of your workers. And employers don't always make the socially optimal choices but I think increasingly employers are constrained by the quality of workers and the skills they see. I actually have a new book on this called *Where Are All the Good Jobs Going?* where I document a trend over time. A couple of generations ago you didn't have to be a highly skilled worker to have a good job in durable manufacturing. As we all know, that world has changed a lot and I think workers -- I think employers pay a lot more attention to the potential skills of their workers before they create those good jobs. So you can't do one without the other in any way anymore.

My clicker isn't operating. Here we go.

So just quickly then to the issue of workers' skills. And a lot has been written on this on achievement gaps and dropout rates. I don't want to go there. I think one of the problems, and Alan Krueger referred to this a little bit in his remarks, is that our education and training system is too disconnected from the actual labor market, the demand side of the labor market.

For instance, we don't really have a lot of high quality career and technical education. We have some in the United States. I'm not talking about old-fashioned technical education. I'm talking about high quality career technical education that Germany and other places on the continent of Europe have done a better job on than we have. I think the whole controversy over tracking and things like that have limited our growth in that area. We've send a lot of people to college but the truth is that our non-completion rates of people who attend college are enormously high, especially at community colleges and the non-flagship schools. A lot of different reasons for that. I believe part of the reason, one of the many reasons for that, is that those institutions are too disconnected from the labor market. And even when people finish a certificate or an associate's degree or bachelor's degree, there's enormous variance. And a lot of people aren't investing in the areas that are really rewarded by the labor market. And I think at a lot of places community colleges, there's very poor information, very little career counseling going on about the labor market.

I also think the incentives of those institutions that respond to the labor market are often limited. You know, everyone knows that health technology, a lot of the health care jobs are in high demand. Kids can't get into those classes because they're constrained by capacity limits and the institutions don’t have the resources and the incentives to change that. So I think all of these are -- and then finally there’s the whole workforce system, which I think does operate quite effectively in the United States in many ways in the one-stop shops. But in many ways it’s both too small and too disconnected from the educational system as well as the labor market to make the whole thing work better.

So those are some of the problems I see. Now, having said that, as was indicated earlier, there are some very good models out there that have been rigorously analyzed through random assignment studies. I list the three most prominent there. These are studies that come out much better than the average in terms of returns to training, for in-school use, the career academies. For out-of-school use, a small and up and coming sectoral program called Year Up, and finally, a program -- three programs, one of which you’ll hear about more in a few minutes, broadly called sectoral programs that targeted the demand side of the labor market more effectively and where the returns have been very strong in all three of these programs. And all of them share a set of important attributes, I think. It's not only high quality education and certification but it's education closely linked to key sectors in the economy and involving employers in the training, training workers for jobs that actually exist and involving the employers who will be hiring them afterwards. Plus a lot of support services that intermediary organizations help to pull together as you'll hear more about later.

So my proposal is basically to build on this success, for the federal government to generate a new competitive grants program for the states, to encourage these highly effective education and workforce systems, consisting highly of these programs to pull these things together and do more of this. I promise $2 billion a year for five years. When I started writing this paper back in March that didn't seem like quite as much of a stretch fiscally as it might seem right now. Maybe you can start smaller. It built on a lot of the efforts that the states have already made. A lot of good work was done in the last decade at the state level building these kinds of systems more actively tied in with the labor market. So we're not recreating the wheel when we do this.

These are some of the things that will be funded with that money. Stipends for work experience, support for community colleges, providing career guidance and other supports. More incentives. The states could provide bonuses to the colleges that are more responsive to the labor market and to high demand areas. And also money for high road employers, tax credits and technical assistance so that they do more of that work.

If I can mention just a couple of quick issues and caveats. No proposal is perfect. There are always holes in any ideas you might come up with. I just want to throw a couple of things out there very quickly. Number one, people often say what's the relationship of all this to WIA, the workforce investment system? In my view this should not be a substitute for WIA. It should not be one more reason to cut WIA. We've been doing that for 30 years already. I would like to preserve the money that exists in the system but I think this would be a supplementary program on top of it and hopefully it would make the whole system more effective.

Secondly, what's the right mix of general skills and sectoral targeting? You know, you worry a little bit if you target too closely to the labor market. Labor markets shift in important ways, in ways we don't anticipate. You don't want to target too carefully. You want to give people a strong base of general skills coming out of all these programs, and you want to make sure that employers, you know, if you want to hire a welder -- and there's a lot of unemployed welders of this type and not of this type -- that employers could plug it through the system and do some modest retraining to get there.

Finally, one last concern people often say to me. If the jobs aren't available, why train people for jobs that don't exist? And, of course, as we said, the number of jobs out there is an independent fact. At the same time, I think we should move ahead with these kinds of programs. Even right now, and as Alan Krueger talked about earlier, there is something like four million jobs that are vacant at any time that need filling. The American labor market churns a lot. Jobs are being created, jobs are being destroyed. And a program like this I think would make it easier for currently unemployed or currently low wage disadvantaged folks to have the skills to make them more competitive. And I think would raise their employment rates even in this kind of economy. And certainly as the economy develops.

So thank you for your time and interest. And I look forward to the discussion. Thank you.

(Applause)

MR. GREENSTONE: Harry, I thought I would take advantage of being a moderator and ask the first question.

I think as you pointed out, the current fiscal environment is a little constrained. And one reason that we really loved your proposal and people are so excited to award you the prize was you took on the issue of cost and benefits. Can you talk a little bit about what the benefits of the $2 billion a year might be?

MR. HOLZER: Well, so in the paper, with substantial assistance from the Hamilton staff I'd like to credit, but I did some simulations using a variety of different assumptions about -- and using numbers from those random assignment studies, like the sectoral programs, as to what potential returns could be after certain kinds of expenditures and using a variety of different approaches and different assumptions. And all of those simulations easily passes any kind of a cost benefit test. An expenditure, let's say, of $2 billion a year would generate returns and benefits to workers onto the economy of several times that number. So again, if carefully implemented and the fact that we implemented the returns could be well in excess of the costs.

MR. GREENSTONE: Does anyone else want to ask Harry a question?

SPEAKER: You can continue on.

MR. GREENSTONE: Okay. So we have Rhandi Berth here from Wisconsin Regional Training Partnership. And their organization has been around a couple decades. Their mission is to enhance the ability of private sector organizations to recruit and develop diverse qualified workforces in construction, manufacturing, and other sectors. So, as we dug in, we talked on the phone and as we dug into your organization one thing that I was really astonished by is it seems to be an organization that is able to pull together the private sector, public sector organizations, including the Department of Corrections, I notice in units in a way that seems to produce documented quite effective results. I wonder if you could talk about how you managed to pull all that together and how that might relate to the skill ability to other locations.

MS. BERTH: Well, thank you. Yes. And I think that the time we're in now with the economy in as rough shape as it is reminds me of why we were created in the first place. In the late '80s, we had done a study of our businesses and whether they were willing to grow and expand. And if not, what were their issues? And we were pretty surprised by the lack of confidence that our employers, especially in the industrial sector had in their current workforce to accept new technologies and new work processes. And the confidence level and the future workforce was very lacking. So they did decide to build offshore or in other states where wages and benefits weren't as high as they were by us.

So a regional training partnership was formed with unique, I think, partners with the university and the studies that had been done. Economists helping us understand the data and where things were going. Key individuals with our governor at the time and management organizations, and as you mentioned, labor also, the union. So, you know, having them sit around the table, I think I feel like, at least in our state, things are so polarized it's hard for democrats and republicans to agree today is

Wednesday. And that's how it was back then. You know, we had skill trades people on the streets and, you know, our factories were rusting up. You know, so this partnership was really formed and it actually reorients the workforce system to respond to the current openings and the jobs that are there.

You've heard today about, you know, disadvantaged workers and youth workers and folks from corrections and displaced workers and the industry just wants the best workers. You know, and they really just want for us to figure out a way to minimize the gap between the skills that are needed to help our employers grow and expand and the skills that currently exist. In Wisconsin, we're like one of the top states for having our kids go to college, and our biggest city is one of the bottom in the nation for getting them to graduate high school. So there's this huge disconnect between how things are decided and what things are done.

When we look at the number of job openings that are out there, you know, the first thing I say is what do they pay? And what do the people need to know? And we work backwards from the traditional system to say, okay, this employer needs, you know, XX, whatever, and in the process our employers help us select our students which are taught by either a technical college or a trade if they're an apprenticeship. And three things happen. You know, one is the employer says they already have the skills. They don't need training. We'll take them. We'll hire them.

The second thing is the employer says if they successfully complete this short-term pre-employment training program that we have worked with and developed with you, then they're my pipeline and I guarantee them a job or commit to hiring them.

And the third thing is, well, wait a minute. They're just not ready. There are some other barriers to employment here at our place that you need to help us in working with your partners overcome. So I think all of this is really looking at how do we help our economy grow by focusing on the workforce development arm and not really creating programs in a way that typically is the path of least resistance? You know, let's put everything into the easiest employers to serve with the lowest wages instead of forgetting to try to help create and help these jobs that pay the best and have the best benefit packages.

MR. GREENSTONE: Thanks. Maureen, you're the executive director of the Economic Opportunities Program at the Aspen Institute. I might also note you're a little bit of a policy wants dream. Having written and author of a very influential paper and job training programs and being focused on finding the programs that have the highest return, I wonder if you could talk a little bit about how researchers can connect with job training programs and find ways to evaluate them. And then also more broadly talk about the degree to which how we spend our training dollars pays attention to the important research that you and others have done.

MS. CONWAY: Great. Well, thanks. I'm not used to being somebody's dream. So.

So I think the question about evaluating programs I think is an interesting one. We've spent a fair amount of (inaudible) different kinds of evaluations with programs and one of the things I hear a lot oftentimes when we want to learn about what works in a program is we want to learn about it for the purposes of telling students which programs to choose. Or we want to learn about it so we know which one to fund. But what I have found actually in doing evaluations, the people who are most interested in learning what works are the people who are running the programs. And they really want to learn a lot and in a lot of detail about what they're doing that's working. They actually really care about the folk who are coming through their doors getting them to a better place. And I have found that if you start with engaging them, just a practical matter. They don't lie to you as much. If they're not worried, they're just going to cut their funding, you know, and if they think they're kind of in it with you, you can have a much richer understanding of what's happening and you can really have a good sense. So that is just one thing that I think as we think about building the systems to learn what works, we should not forget in any way that the people who are running the progress are some of the most interested consumers of that information. And they really don't have the infrastructure themselves to manage the data in a way that they can do that learning on their own.

So having people come and being able to frame an evaluation -- how many of us love being evaluated? I have found when I say I'm here to evaluate you, sometimes that's not really a great opening line. (Laughter) But I think if you can engage them so that there is something in it for them, too, that really helps the whole process. So that's just one thing to say because I think that this work that we're asking programs to do in terms of understand what's going on in your labor market, understanding the needs of the people coming in your door, they find the different employers in your community. Find out what their skills are. Develop relationships with them so you're speaking their language so that they'll tell you what they need. All these things -- it's a fairly complicated set of things that we're asking people to do. At the same time they have to manage the money that comes from WIA. They have to manage maybe they have some philanthropic funders hopefully. They have some different kinds of funding streams. They have to manage all these things. So it's a very complicated set of things that they do. So I think figuring out how they can learn is really -- how they can learn from each other is how they can learn what works -- is really a critical part of what we do.

I'm probably not even answering your question, am I? Because the last thing I just wanted to say which does relate back to sort of Harry's proposal and what I particularly appreciate in Harry's remarks was to say let's not use this as another reason to cut WIA because one of the things that I have seen programs struggle with a lot is the sort of sustained funding. Building this work really takes time. The program -- so there were three organizations that were selected for the random assignment study that Harry noted, and they all had a significant track record in doing this work. And they worked really hard to bring different funding sources together to sustain their work over time. And their work gets better over time as they know more employers, as they know more actors in their community.

And I think one of the problems of funding streams that do sort of competitive grants for other kinds of things, if it’s a large chunk of money and then it goes away and then you have to find the next thing and then it goes away, it makes it really hard to sort of sustain those relationships. Employers who you had just been building a relationship and then you disappear, then the next time something comes along they’re not that trusting and don’t necessarily want to work with an organization. So I think definitely not cutting WIA and not cutting sustained funding streams is a critical piece. But to add to that so that you can find innovation and sort of move fields forward is really important as we think about how to support this kind of work.

MR. GREENSTONE: Thanks. We're very fortunate to have Steve VanAusdle, who I was a little daunted by this when I looked up his bio, has been the president of Walla Walla Community College since Walter Mondale was running for president. (Laughter) And he's been credited with helping the institution provide innovative programs that have benefitted the entire Walla Walla community and broader areas as well.

So I wondered if you could talk a little bit about, you know, how do the community colleges fit into this complex system of nonprofit organizations, private businesses, and what do you see as a role and what are the challenges to running a community college that wants to facilitate those interactions?

MR. VANAUSDLE: Michael, I appreciate being invited to participate. Very interesting to listen to Alan Krueger, read Harry's paper very carefully, look at the role of community colleges and look at the challenges that our country faces right now. I try to look at my job through an economic lens today because I think what it's all about is creating jobs, creating better wages for workers, and it's about productivity. If we can't increase productivity in our country, then we can't sustain the jobs we have, let alone create more and even better wages.

And I think there are three pillars that do that. One is talent. Another is investment in the research we do, and the third is the infrastructure that we're investing in. And the assumption that I make with some of the organizations that I'm working with, is that those nations, those states, those communities that can grow and develop the most talent will win the 21st century.

So now to your specific question, we have a workforce development system in our country. Community and technical colleges are a part of that. We have community-based organizations that contribute to that. We have one-stop programs through the

Employment Security System. We have a pretty comprehensive system.

Community colleges play a key role in that. And I want to tell you why I'm pretty optimistic about the future and why I think community colleges can be a game changer to help us not only provide for the jobs we need but help business and industry create some jobs here in the future. The Trustees Association right now has a big project where they're looking to create a governance institute and it's about student success. It's a completion agenda. It's a concern that you point out so well, Harry. We get so many students down the pathway and then for some reason they don't cross the finish line. So the whole governance structure of community colleges in this nation now is getting a strong orientation to the need to complete the programs that we start. And we need to write programs. I think that's going to be extraordinarily helpful.

We're also moving into systems that pay for performance, to pay for outcomes, pay for student achievement. And our state is a great model. We have metrics that we're tracking that measure the student achievement of students throughout the institution. And when I listened to Krueger and read your paper, I thought about how complex some community colleges are and how different we can be.

Now, our institution happens to put more than 50 percent of our effort on workforce development programs. Some community colleges came out of the old junior college concept, and depending on the needs of their community they may have 30 percent of their effort towards workforce programs. But what I am pleased to say now, I think we are embedding some of the concepts that you talk about, taking them much more seriously. It is about partnerships and it's about innovation, and it's how we connect our programs with business and industry. How we collaborate. How we work together. How we leverage. How we partner with four-year colleges and universities and the K-12 system to create pathways for students so they know when they start a pathway what might be at the end of that path and every step of the way of how to get there.

Innovative approaches are being used. We have actually funded a one-stop in our community to help them work with our students and increase participation rates. WE actually completed a current employment center on our campus. They've actually placed people on our campus. We have student achievement coaches on our campus, so it's all about completion right now. Have students start but the important thing that we start so much about, students need to finish what they start today to be successful.

MR. GREENSTONE: Thank you. Before we move on I just can't resist the opportunity to ask. Now, I believe if we go back a decade or maybe a little bit longer, Walla Walla, Washington, was not actually the wine center of the world. (Laughter) But I understand from my local sources, one of the staff members of the Hamilton Project is from the state of Washington. She can't stop talking about it. But one of the things she's pointed out is that Walla Walla has really turned into kind of a Mecca for wine. And I understand you were in some way involved in that.

MR. VANAUSDLE: A bit.

MR. GREENSTONE: So there's got to be a nexus of local economic development, job training, community colleges. I wonder if you could provide some specifics to that. And I'll just note everyone in this room is a little upset that you have not brought any of your product. (Laughter)

MR. VANAUSDLE: Well, next time. Well, when we discovered that wine was prosperity in a bottle, it gave us a vision. Real economic development is really challenging in this country. You know, we had our labor force movement in urban areas. Outmigration of population. Back in the late '90s we were a community based on natural resources. So food processing firms were being moved offshore. A real change. The economic base was deteriorating. Population was in and out migration. And we had lots of displaced workers coming to the college looking for solutions.

We needed something to turn our economy

around and basically look at value-added opportunities. And we had this idea -- we had a core of about seven wineries in the community and one of these wineries had just been written up in Wine Spectator as making absolutely the best merlot in the world. You know, that's a pretty good commendation. It gives you a place to start. We also had a staff member that had one of the seven premier wineries. And I can remember Bill Gates serving his wine at his big annual event.

I cornered Dr. Miles Anderson in the office one day and I said, "Miles, we need to try something here. We need to see if there's an interest here in creating an industry." Now, you wouldn't find information to say to do this but there was a felt need. We had an idea and absolutely no money. But Miles agreed to do that. We pilot tested some courses. We had 800 people show up for these courses. Our community was interested. We had people from Spokane, Seattle, the greater area, interested, so yes, there was an interest. We put together an industry-based committee to do a lot of listening before we did anything and they said this is an idea worth pursuing. So with a strong advisory committee and without any money we raised some money to hire an architect to kind of design a facility that houses a little program that we saw as a possibility. It went from a dream of about a half a million dollars to 5 million in about two months. And we decided to go forward. We totally had about -- we were skewed about 1.5 million of federal money. The rest of it was donated local money. And a lot of it came from outside the area. It was that powerful of an idea.

And when we started the program it was pretty unique, very entrepreneurial. A commercial winery in this facility that students run and students market the wine, but it also served as an intermediary for our emerging industry. That's where the wine alliance was based. So we found ourselves entwined with an industry well beyond training worker but providing all the infrastructures this industry need to grow.

When we opened our doors we had 17 wineries in the community. Our vision was to teach students how to grow the best wine grapes and make the best wines in the world. That was our vision. And that's what we've kind of stuck to and think we're close to it. We now have 152 bonded wineries in that community. We've created hundreds of small businesses. And Walla Walla has turned from a depressed economy into an economy that's struggling in some regards but thriving in many regards compared to other areas. This program has been discovered throughout the nation. We get visitors practically from every state and many foreign countries coming in. It's an example I think, Harry, of some of those components that we need to build strong programs, especially strong partnerships, industry-driven pathways.

It's interesting though because when you get into the metrics now and you do a follow-up of our knowledge e-students, you're not going to find some of them because a lot of them are entrepreneurs and they're not working for salaries. Many of them are winemakers. They have their own wineries. And they're making extraordinary sums of money right now.

MR. GREENSTONE: All right. Thank you. That was illuminating. (Laughter)

MR. VANAUSDLE: The wine will come later.

MR. GREENSTONE: Okay. So we want to reserve some time for questions but I want to hear from more of the panelists first. And so this is a new idea I just had. I thought we would see how it goes. I thought we would ask each of you if you could change one thing about our job training system, what would it be? And it can't be to enact your proposal. We've already all agreed that that's (inaudible). So you should go first, Harry.

MR. HOLZER: One thing. It would be great if we could enable and incent and assist more community colleges to operate like Steve's because what I see, you know, and I might have been too negative in my earlier comments. You know, the sense you get when you start looking more closely at community college is how highly varied they are both in quality in terms of their academic versus labor market focus and a set of things within WIA and more broadly to make them more responsive to the demand side of the labor market I think would go a long way. And to build all systems around that but that would be a central focus.

Certainly from the point of the disadvantaged population where so many low income folk get Pell Grants, which is great. They go off to these schools. They don't finish anything. Enormous sums of money are wasted. I think we can do all that a lot better at the community colleges. But with workforce assistance and economic development as part of it.

MR. GREENSTONE: So is there a concrete thing that we could do to bind community colleges to the private sector a little bit?

MR. HOLZER: Well, I think incenting more of them to provide more effective career services and other supports, child care and those kinds of things. And incenting the institutions just to be more responsive and to expand capacity in areas where demand is going to be there.

MR. GREENSTONE: Okay. Rhandi? One thing.

MS. BERTH: One thing. So more money doesn't count. Right? (Laughter)

MR. GREENSTONE: I think everyone wants more money all the time.

MS. BERTH: Well, I really think it is kind of ditto to everything people have been saying but instead of the race to the bottom to the worst employers, I guess I would say figure out a way to serve the higher wage better jobs in the area because it seems like there's a disincentive to do that. So whatever the incentive is to target good jobs and good employers would be what I'd hope for.

MR. GREENSTONE: Maureen?

MS. CONWAY: Only one?

MR. GREENSTONE: Only one. It can be -- if there's a tie you can tell us about two.

MS. CONWAY: Well, because -- so I'm in the evaluator role here. So one of the things is to improve the data systems. Right? And I think, you know, I mean, people have talked about whether they can or can't look at the UI data, whether people show up in the UI data or they don't. And you know, we sort of have this -- we do actually have the national -- I forget what that -- what's the national database here? The new jobs database. Right? But of course, nobody can use that. That's statutorily not allowed to look at that. You know, so it's just -- so it would be -- one thing that would be really nice --

MR. GREENSTONE: Can you talk a little bit about the specifics about that? I think this is an important point. Let me just set you up here. You want to bring Moneyball to job training. Right?

MS. CONWAY: Yeah, you know, everybody says you should be, you know you should be outcomes driven and yet it's so hard to figure out what your outcomes are. So I think we should make that a whole lot easier basically is what I'm saying. And I think that there are ways that we can do that and that we have the data and we could do a lot more to facilitate connections between what are the services people receive and what do we see in data that we already collect about where they are in the labor market.

MR. GREENSTONE: What's an example about some of the data, how they're doing in the labor market?

MS. CONWAY: And so one example I mentioned was this new jobs database which is a national database that basically aggregates the UI. So in a place like Walla Walla where maybe people are going across state lines or something like that, you wouldn't have that issue. Which now if you're using your state system, if I'm sitting in Chicago and people go get jobs in Indiana, I don't know that. Right? So --

MR. GREENSTONE: So this database is for a lot of people to see the earnings?

MS. CONWAY: So this database would allow people to see across state lines and things like that. It wouldn't address all the issues in terms of the entrepreneurs and things like that but at least it would address some of them. But I think the critical thing is to make a more systematic connection and make these more easily acceptable. Obviously, with the privacy protections but to make this more easily accessible so that right now you have a lot of organizations that have to spend a lot of time trying to track people down, find out if they're working, get them to send in their paystubs, whatever, just so that they can report outcomes. And I think there could be a much more efficient way to get this done that would sort of play to the systems we already have. So that's --

MR. GREENSTONE: Okay. So you might be very interested in a proposal we released about a year ago by Bridget Long, who -- Bridget Terry Long, who teaches at Harvard. And she made the following observation, which once you hear it you just -- it makes more and more sense each time you think about it, which is people go to college and it costs about $100,000 to go to college for four-year schools and maybe $30,000 or $40,000 for two-year schools. All in, including the lost wages.

Now, when we go to buy a -- I guess channel Elizabeth Warner and we go to buy a toaster, we have some sense of what that toaster is going to do and there's some product safety thing on it. But there's no information when you sign up to go to community college. Well, what's the average graduation rate? How much does the average person earn? And things like that. And is your idea that this could help fill in some of these gaps?

MS. CONWAY: This could help fill in some of those gaps but I think back to what I was saying before, so it could fill in some of those gaps in terms of what am I going to get from going to this education system as a consumer of education services, but it could also fill in gaps for the people who run the education services in terms of figuring out how well am I doing. You know, can I figure out am I doing as well with women as I'm doing with me? You know, am I having a problem with certain minority populations? Where, you know, how am I doing? And they're very interested in these questions. Am I having a hard time with people who come in with literacy at a certain level, right? Is there a different strategy I should be doing now? Where do I need to sort of raise my game? And I don't know that unless I can figure out how I'm doing.

MR. GREENSTONE: Thanks. Steve, one thing.

MR. VANAUSDLE: I want to echo this. We're working on it. We've got a product called "Career Coach." It's on our website. It's put together by some economists that we retain on an ongoing basis to give us information to make good decisions but a student can go on there, find out all the jobs that are available within 100 miles right now. It can tell them what competencies they need for training and what they need to do. But my one thing is a shared vision for community colleges in this nation; shared by not only the individuals within the system but by key leaders outside the system. I think the community college can be the game changer that we're looking for. We need to understand it better. We need to finance it better. I think, you know, the participation and the contribution studies that we're doing show tremendous return on investment to the student, to the community. We heard some of that from Krueger. So I think it's that shared vision.

I know the National Association of Community Colleges has a future study underway right now and think the study is very timely and could be a basis for us doing this. If we have this, then we'll get better alignment of the priority needs and the resources. But we need a healthy economy and we need a healthy environment. And I think we can be game changers in both of those areas.

MR. GREENSTONE: Thanks. Okay, there's note cards going around the room and we've already collected some questions and I thought I would turn them -- start reading a couple of them. The first is clearly community colleges play a key role in training. Can one of you talk about the role of adult education Title 12 and training, the workforce for the future? And how would you improve the adult education system? Does someone ant to take that?

SPEAKER: Well, I'd be happy to take that on. I think, you know, we have needs to learn throughout our lifetime and it's not the old model where you go to school and then you go to work. Now you go to school, you go to work, school, work, school, and so on. So we have people coming in and out of our system constantly. And this fouls up some of the information you talk about in terms of completers because some of our students have an intention of earning a degree or a certificate. So we don't show credit for these individuals. Some of them come in for very specific skills.

I'll give you an example. I work with the John Deere Corporation. We're in a very agricultural area where technology has just absolutely changed the game. It's about precision farming. Not only Deere but all equipment operators, all farmers. So they need to understand how IT can be used to increase productivity and better manage things like chemicals as they apply them.

So the college gets a request and money comes with it to do these short-term training programs. You know, we've just got to figure out where we spend the limited energies and the time we have right now to get the most value-added. I think the adult ed area is, you know, if you look at the incumbent workforce, that's the workforce of the future. As you look 10, 12 years out, that's the majority of the workforce. And we need to be investing in these incumbent workers to help them secure their jobs, keep their jobs, and also add to that important productivity so we can pay more wages.

SPEAKER: I want to just echo that as well. I think, you know, if you're looking at the next 10 to 20 years which realistically is the time horizon, medium-term time horizon, mostly the jobs out there are not going to be filled by youth. They're going to be filled by adults with different skill levels. A lot of adults are the ones, of course, being dislocated and have training needs and the next paper will talk a lot about that. A lot of the disadvantaged workers that need this training are adults, and I know your program, a lot of the sectoral programs that have been most successful have focused on that adult population. And in this recession, the fractions of adults often unemployed adults going back to community colleges or four-year has been a big number. So that's a very large part of the workforce system.

Youth are very important. I've spent a lot of my career talking about youth. Adults are very important, too, both disadvantaged, dislocated. And the third category of folks, just going back to upgrade their skills and upgrade their earnings potential.

MS. CONWAY: I just want to add one thing to that because I want to echo one thing that Steve mentioned, which is that to do it fast is really important, and I think one of the things our education system isn't built for, whether it's funded through, re-entitled to, or whatever, is for adults to be in school for a long period of time. They have families, they have responsibilities, and I think the opportunity costs are even greater than, you know, sort of our traditional young student who are, you know, not have as many family responsibilities and so forth to manage. So I think being able to come up with different models that are compromised and time sensitive, and at the same time many of the adults that are coming back have sort of more traditional learning needs in terms of just basic literacy, math skills and things like that. And we do have models for integrated training and we just really need to roll them out in a lot more places.

MR. GREENSTONE: Okay. I think this is a question probably at least initially for you, Maureen. How are successful programs sharing data, work plans, protocols, evaluation tools so that other regions can adopt and adapt -- can adopt proven strategies to serve those in need of services?

MS. CONWAY: So that's an excellent question and, you know, I have done a lot of work with facilitating groups of organizations that are trying to learn from each other, and I think that there's not -- two sort of comments on that. One is they're very willing to share it but the second is that there's not very many mechanisms to sort of facilitate that sharing. And so I think that there is a lot of knowledge about what works that stays isolated within particular programs and that there could be a lot of work done to do this. And I think that some states have really worked in how to do that. Harry mentioned some of the states that have done sort of some more innovative strategies in Pennsylvania, Washington, Massachusetts, and I think one of the things that they've really worked on is how do we bring our service providers together so that they can learn from each other and they facilitate this interplay. And I would really encourage more states and areas to do that. And I would even encourage people to think about national ways of doing that because I think one of the best ways people learn and learn quickly is from their peers. And like I said, I feel like there's a lot of willingness to share.

But it takes some resources. People have to have some time to leave their job. They have to have some convening that happens to allow them to share this information with each other and to develop relationships with networks. So I think it could be a really worthwhile investment but it does take a little resource support.

MR. GREENSTONE: Okay. So I feel it's a little embarrassing to be on this panel with all these experts on it and actually, this room, the list of people is really an incredible set of experts on this topic. So I'll ask a question, although my ignorance will be revealed here. What role do you see for CBOs and other intermediaries in a community college-centered workforce center, especially regarding disadvantaged, low education level workers seeking better careers? And so my ignorance is focused on CBOs.

MS. BERTH: Okay. Community-based organizations.

MS. CONWAY: I'll start on this because I feel like I've been working on this for the past three years.

So we have been doing a lot of work to try to facilitate partnerships between community college and nonprofit organizations, often referred to as community-based organizations or CBOs. And you know, the role that they play, we can be very varied. We have sort of seen that, you know, there's essentially not just education that people need to sort of be able to get to better jobs but they also need support services to, particularly when we're talking about disadvantaged populations, as I mentioned earlier, to sort of have them have the time and space in their lives to be able to persist on an education pathway and to have time to learn. And they also need to have what we call industry navigation services. So how do you figure out how to develop a professional network? How do you figure out where the jobs actually are? How to interview for those jobs? How to behave in those work environments? And also just understanding what are your aptitudes and what might be the job that's the right fit for you? So sort of bringing these navigation services, these support services together with an education program I think is sort of key to success particularly for low income and disadvantaged workers, and CBOs, to use the term of art, can play a real key role in that.

MR. GREENSTONE: Do you want to answer this?

MS. BERTH: Well, in our world, you know, we're more of an industry partnership with a private sector board of labor and management, so we're a CBO but we're not a CBO. We have CBOs that help eliminate barriers to employment. So the things like drug testing and driver's license and, you know, the things, the basic skills, we rely on them to help get people work-ready. And then we take them to the final step of industry or employer-ready.

MR. GREENSTONE: So the focal point of this panel is Harry's paper and I think this question, which just came up, is an excellent but challenging one. So I'll just pose it to the group, see if anyone is brave enough to take it on. The federal government current -- and I assume that the person who wrote this knows what they're talking about -- currently spends about $16 billion on worker retraining but it is spread over 47 different programs across 9 different federal agencies. According to GAO, all but a few of these programs are duplicative. Could Harry's magical $2 billion per year in any way be found in those 47 different programs and $16 billion? And is anyone willing to name names about where that money is going to come from? (Laughter)

MS. CONWAY: So can I make one comment on this because I don't think all of those programs are duplicative, and I think we have to really be a little bit more acknowledging of what those different programs actually do. We have programs that are for (inaudible) recipients. We have programs that are for youth. We have programs that are -- right? These are not the same people.

And the other thing is, back to a comment I made earlier, is a lot of these programs cobble together. I get a little bit of money from this one and a little bit of money from this one and it costs, you know, it costs a certain amount of money to run these programs. And you have to piece them all together to get it to work. And one year one program has money. One year another program has money. I mean, so those are all of these things that go on.

So, you know, people might think that just because they all do training, they do the same thing? I think ask we've discussed, training is a very varied enterprise. It serves a lot of different people with a lot of different needs. It provides a lot of different skills to go into a lot of different kinds of jobs. So just because they all touch training does not mean they do the same thing.

SPEAKER: Yeah. Let me follow up on that. Every four or five years the GAO writes this report. And it comes out almost with regularity. And it's often interpreted and used for some of the political -- same political reasons. And I think a lot of it is misinterpreted. I mean, the names, they're not all exact. A lot of these are -- first of all, the vast majority of the money in the system is concentrated in the few big programs, like WIA, and a few of the others. Most of those other programs are very, very small and very targeted, and they don't do exactly the same thing.

And frankly, if you take that $16 billion number -- the right way to think about that is out of a percentage of GDP, that's about 0.1 percent of GDP. It's the lowest expenditure on workforce programs of any major industrial program in the world. So the whole premise that there's 47 different organizations spending and doing all exactly the same thing I think is wrong. Now, and frankly, you know, what I'm proposing is something that would actually try to make that whole system a little more effective by pulling together all those fragments and all those disparate pieces. I think that's what's missing. There's a lot of stuff out there right now, all kinds of federal competitive grants and state grants. The foundations have been pumping a lot of money into this area but it's very fragmented and it's all over the place. And

I think, you know, part of my idea is to have a grant system to provide some funds and some incentives to pull those pieces together into a more effective operating system. But the fundamental premise, that reading of the GAO report, I think, fundamentally is not the correct one and should not be used as an excuse to further drain money. Is there some room for consolidation? For some efficiencies and consolidation? Yes. I think that's probably the correct reading of the GAO report. And I'll leave it at that.

MS. BERTH: But the missing piece is pulling them all together, targeting them towards where the jobs really are.

MR. GREENSTONE: Steve, do you want to have our last word here? Our brief and last word?

MR. VANAUSDLE: We have 500 displaced workers on our campus in formal, long-term programs today. Most of those programs are not funded with federal dollars. They're displaced money from the state of Washington and partnerships. Most of the money that's federal money is money that's going to students which may help some of them get in and get started in those programs. Federal money isn't building a lot of capacity at our place and we need to be building capacity.

MR. GREENSTONE: Okay. This has really been a fabulous group and fabulous conversation. I hope you can all join me in thanking them. (Applause)

MR. GREENSTONE: Okay, I think we have to get started.

First up we're going to have Lou Jacobson. Lou, along with his colleagues Dan Sullivan, who's here today, and Bob LaLonde have been doing absolutely seminal research on displaced workers dating back really to the early 1990s. They wrote a paper in the 1990s that has a graph -- I think we'll see a version of it here -- that I was inspired by when I was in graduate school, that one day maybe I can make a graph that looked just like that -- use real data (laughter) -- and really has captured my attention and I think captured a lot of people's attention. And I think what Lou is going to talk about today is kind of the culmination of two decades of thinking about the very important social problem of workers who've had long-term jobs and then find themselves without that job and what happens to them and what can be done to help them.

So, I should also note we're going to -- again, we'll have questions at the end of this, and cards will be going around and you should feel free to start asking for those cards right away.

So, with no further ado, Lou, you want to tell us about your proposal?

MR. JACOBSON: So, here's the slide. And I want to thank the Hamilton Project for inviting me today and for the excellent introduction. I'm very happy to be here to present the proposal that Bob LaLonde, Dan Sullivan, and I developed.

This slide describes the problem we address: the large losses high-tenured dislocated workers incur. It's based on research Bob, Dan, and I conducted using Washington State data covering hundreds of thousands of U.I. climates.

The top green line shows that dislocated workers with six or more years of tenure typically earn about $45,000 prior to job loss but only $25,000 four years after job loss. Workers with less tenure have lower earnings before dislocation but about the same earnings afterward. High-tenure workers have large losses, because they have a lot of human capital specific to their firm and industry to lose.

Thus, this figure shows that the bigger you are, the harder you fall.

This slide describes a solution to the problem. The left-most bar shows that without training, the lifetime losses of a 40-year-old dislocated worker whose earnings fall by $10,000 per year would be about $120,000. The middle bar shows losses if the worker obtained two years of low-return training. The right-most bar shows losses can be reduced by more than half if the worker obtained two years of high-return training.

Like figure 1, this figure is based on the

Washington State study, but it's very important to note that, first, less than four percent of workers losing jobs in Washington State had even a year's worth of training, and less than two percent obtained anything close to two years of high-return training.

To ensure workers against large losses, Bob, Dan, and I propose taking four entry-like related steps to greatly increase the number of high-tenure workers completing two years of high-return training.

The first key step is providing large grants that can cover the out-of-pocket expenses of being in training for up to four years. We propose depositing up to $5,500 every six months into a training account for workers who had three or more years of tenure job loss; are currently reemployed, in training, and receive career counseling. The exact amount is proportional to the size of the earnings losses experienced. Workers can receive up to $36,000 over four years.

We require workers to be employed to ensure that they can cover basic living expenses and make the program affordable to taxpayers. We know that most students are employed while attending community colleges. These colleges offer classes at times and places that make it easy to combine work with school. And work experience often contributes to boosting long-term earnings.

The second key step is requiring that grantees obtain advice from honest brokers and one-stop career centers. One-stops have been in existence throughout our nation for over 10 years and, as their name implies, they routinely provide a range of services from different government programs to workers wanting to improve their careers. But one-stops are so severely underfunded that they are only able to spend about $50 for each worker requesting help, and they're only able to provide in-depth career counseling to a tiny fraction of dislocated workers.

Based on our data analysis and field interviews, it's evident that, one, workers often fail to match their backgrounds and interests to high-return programs that they're likely to complete. In particular, they often overlook their high-return programs in building trades and protective services. They're much less demanding academically than programs in IT and engineering but lead to about the same pay.

Second, community colleges do not have the resources or incentives to review students' programs of study or help resolve academic and personal problems that develop during training. Thus, it is hardly surprising that practitioners universally praise one-stops for providing assessment and core selection counseling that helps dislocated workers make sound choices. And they also strongly feel that these services should be made available to many more dislocated workers.

The third key step is using currently available data to measure the returns to specific programs at specific public and for-profit institutions for workers with different attributes and who are in different labor markets. Having this information would greatly facilitate making sound choices, holding training providers in one-stops to high standards, creating financial incentives that reward excellence.

The fourth key step is increasing the availability and quality of training. Recently, Race-to-the-Top grants have stimulated innovations in the K through 12 education system. We propose extending similar grants to post-secondary institutions to stimulate creative ways to help dislocated workers. We also propose preventing high-return programs from contracting during recessions and, more generally, advocate making it possible to meet demand for high-return, high-cost programs in health care and other fields. One way that this could be done is by adjusting taxpayer subsidies to better match benefits to costs.

In summary, our proposal is based on evidence that the whole is much more than the sum of its parts. That’s why highly effective training exists. Too often, dislocated workers cannot afford that training, and too often they’re unaware of which programs are best for themselves.

In addition, the institutions providing screening and training need more funds. But they will also need to be held to high standards of performance so that they use existing funds more effectively.

Thank you very much.

MR. GREENSTONE: Thank you, Lou.

I thought I would start with the same question I asked Harry. Can you talk a little bit about the benefits versus cost of your proposal?

MR. JACOBSON: Well, I mean, Harry did a terrific job. He’s a hard act to follow.

But in terms of training, as the previous panel made pretty clear, training is something that benefits everybody in the United States. It gives employers the workers that they need that have the skills that, you know, help them prosper. It adds a lot of benefits to the communities. And the returns -- as an investment it actually has a pretty good payoff. Someone’s made that case. Alan was mentioning it earlier. It compares favorably with current stocks and bonds. And, you know, it definitely -- the kind of training we're discussing here, career-oriented training, does have a very high payoff.

MR. GREENSTONE: Thanks.

So, we have a new participant here. Dan Marschall's a legislative and policy specialist for the AFL-CIO.

Dan, I wonder if you could talk a little bit about how this proposal speaks to the problems and challenges that union members and former union members face in becoming reemployed.

MR. MARSCHALL: Thank you, Michael.

You started out your presentation with some facts, and what we hear from our unions across the country is that the crisis really is very severe out there, and I just wanted to provide a couple of additional facts.

For example, between 1999 and 2009 more than 57,000 manufacturing establishments closed in the United States. Presumably, we lost a great deal of good, high-paying jobs in that process. Then in the recent recession between 2007 and 2009 nearly 16 million workers were displaced on a permanent basis. And then if you look at January 2010, only about 50 percent of those workers were reemployed.

So, people are really facing this kind of pain all the time. And, as we've already acknowledged here, we have a severe job crisis and a severe job deficit in the United States, which leads us to say, first of all, that the U.S. needs a secure and good job creation strategy, one that focuses on good jobs, one that helps to push our economy and our employers toward a high-road approach. And, in this context I would say that high-road approach would consist of incentives to create ongoing, continuing partnerships and collaborations between employers, unions, work force intermediaries, and community colleges.

The other point I would make is that it's important, as we're thinking about all of these issues, to look carefully at our existing institutional mechanisms. You know, the network of one-stop centers that's been created over many years is really a great asset to our country. And I think it's in that context that I would say that the proposal that Lou and others have put together -- taking the one-stop centers, directing additional resources to them, building their capacity to provide more intensive career counseling and career guidance -- would be a major boost to the system. And I think that that's a particularly positive aspect of the proposal that would be very important to dislocated workers.

MR. GREENSTONE: Thanks.

So, Rhandi, one of the stricken things about the research that Lou draws on is the really large lifetime wage losses that displaced workers on average have in front of them. I wonder if you could take us back in time a little bit to the 1980s when your organization was just getting going. And I think there are some similarities that might be important about the present. And tell us a little bit -- I know you guys did some very important work with Harley Davidson -- and how that worked. And that was pulling together unions -- the company, the workers. And I think these were a bunch of workers, some of whom were actually being displaced and some of whom were about to be displaced. And I think you were at work trying to reverse the trends Lou documented. So, maybe you could tell us a little bit about that.

MS. BERTH: Well, I -- yes, and I think whenever you're looking at adult learning or workplace education, you've got a variety of skills. On a regular plant floor you can have entry-level workers that are illiterate, that have master's degrees, and that are in the middle. So, to try to create training programs for that type of a group of people is complicated. I think that you've got people that are trying to work, trying to raise families, and trying to be, you know, in school. So, I think dealing with current worker training is in itself complicated, you know. And if they had to take a part-time, low-wage job in order to be in school and get additional training, that's also very complicated.

But I think one of the things that we do not do as well as we need to is value the work experience that they have. Too often, you've got dislocated workers going to try to get some career help, and instead of building on what they know they're treated like high school graduates, you know. So, recently we've had a few plant closings where skilled journeymen or journeyworkers, like in a maintenance machinist type of classification, which is really one of the higher industrial classifications that we have, just needed a little bit of computerized stuff, you know? So, it's really about figuring out where is the gap with what they already know, and how does that help move forward with what the employer needs.

MR. GREENSTONE: Thanks.

So, Steve, one thing that I've learned from Lou's paper, which was a little bit surprising to me, is that funding for community colleges is cyclical. So, in boom times there's more funding, and in lean times there's less funding. And at the same time, of course, the needs for displaced workers actually work the other way.

I guess I wanted to ask you kind of a three-fold question. The first is, you know, what has it been like running a community college in these tight, economic times where I think some of the stimulus money has started to roll away?

Two, if you had an extra hundred thousand dollars, what would you do with it?

And, three, if you had an extra million dollars, what would you do with it.

DR. VAN AUSDLE: Now we're talking.

MR. GREENSTONE: All right. (Laughter)

MR. VAN AUSDLE: Well, in times like this -- just to give you a context -- since the great recession started, our enrollment is actually up 21 percent; our operating budget is down 25 percent; and our completion rate's up about 28 percent. Interesting set of circumstances.

Retention has increased. Our whole focus has been helping students finish what they start. So, there's been a real focus, and I think students are taking their work extraordinarily serious as well.

We've looked at, first of all, the balance sheet. We looked on the revenue side -- where are we going to get the revenues to offset the cuts -- and those revenues are coming from multiple sources. Tuition is set by the legislature in our state as it is many states, and tuition has gone up substantially, which creates challenges for the very targeted populations that we're talking about.

We got into some of our high-return programs, especially where we're adding new programs during tough economic times, and we are in the area of energy and water. We've attached large, gateway fees into those programs. Otherwise, those programs are not going to be there. But the whole concept is the student will be able to pay that back, because they're going to be making better than $45,000 a year, you know, when they get out of those programs.

And then we looked at efficiencies. We looked at the sustainability throughout the campus. How can we become more resilient as an institution, reduce our fixed and overhead costs. Kind of lean manufacturing concepts in education I guess is what I'd say.

First of all, we looked at administrative efficiencies and said which administrative and support staff people do we need to retain? And then we looked at instruction and said how can we get more efficient? And we have a faculty that really stepped up. I mean, I'm so proud of them. Their workload's increased 22 percent, and they haven't received a dime of extra compensation now for about four years. But they increase class size.

We shortened pathways to degrees. We looked at is absolutely essentially to get this student out the door if it's a transfer program or not? Many of our full-time people that have retired -- or in some cases we've had to lay off, not too many -- we've replaced with part-time people. That's not the strategy that I advocate at all. We want full-time people. But it's a matter of keeping that capacity up there for our students.

We worked with a neighboring community

college. We eliminated one program. We had two programs. One was a collision repair program in the automotive industry; the other was a basic machining program. And we closed the machining program, and our students and our equipment and everything went to Columbia Basin College, and they increased capacity of theirs. And then we took their automotive equipment and students. So, we're looking at collaboration on a much larger scale to deal with these tough economic times. So, I think you get the sense that a carpentry program --

I was just telling a gentleman -- we have three carpentry construction programs at our college, and we closed one of those. We actually have kept everything so we can bring it back if the economy comes back. But this was aimed at residential construction up on the border, Idaho border, where we have a learning center a hundred miles from campus. Now, there's not jobs there right now, and if there are no jobs we'd better reinvest those dollars. So, we're doing things like that.

So, you give me a hundred thousand dollars, I'm going to use it on a completion agenda. I'm going to try to get another 50 to 75 completions by putting all that money to high-risk students. And the first groups is going to be those that are advanced in their program that run into financial difficulties that we'd be able to mitigate. And then we'll just come back through the system in terms of length of time in the program so that we can increase our retention and completion rates. They've got to complete those programs if they're going to compete in the job market. I agree with you.

All right, I do want to say to Lou, though, I talked to about 180 of our nursing students the other day, and 70 percent of them are working or they're going to school on a full-time program. That's the world we're living in right now. It's a tough challenge, but they're staying in there. And we have extraordinarily high completion rates in that program.

So, now you give a million dollars.

(Laughter) I'm probably going to take 40 percent of that and put it in the students' pockets; going to use probably at least half of it in that retention strategy to get completions. And we're going to use the rest of it for students that are trying to get in but can't financially afford to access a community college. We turned 300 students away this fall that had formally gone through the advising processes, everything, trying to get their financial aid together but just didn't have enough money to pay the gateway costs of getting into a community college. That gives you an indication of how tough it is for a lot of people. So, we can increase our participation rate, and we could probably, with $400,000, provide an opportunity for 200 of those students to begin their education.

And I can't think of a smarter investment. I mean, we do benefit studies. I've got an economic contribution study with me that any smart investor would say you know, there's not a better place to put my dollar right now than in the community college in some of these high-return programs. I mean, why not? And to go the other direction, it feels to me like we're kind of eating our seed corn right now with the future opportunity of our workforce.

So, then I would go -- we spent four -- I got, how many, 600,000 left? Let's take 500 and let's fill out -- let's invest 250,000 of that in two high-return programs that we're in the process of implementing today. One of those is in the energy systems program. I hope Eric is in the room from Siemen's, because I want to talk to him. He's a partner with us in major energy projects out in Eastern Washington, and we're connecting with some of his people. When you operate and implement an energy systems program, you'd better have a million dollars to start that program. And we're not quite there. But between wind and our water programs, I'd probably take 250 and help get those programs and build some capacity in those two high-return, two-year programs that lead to some extraordinary jobs.

And then I'd take the other 250 and I think

I'd try to create the Harry Holzer prize-winning short-term training model. We do a lot of short-term training, but we don't do enough. I mean, there's many individuals out there that could benefit significantly if we had more capacity. We'd probably take part of that 250 and I would hire some achievement coaches to work with our one-stop center and our staff on campus, and these are mentors/monitors that take high-risk students and track them through, knocking the barriers down as the students, giving -- inspiring them, you know, telling them that they can be successful. Because what you find -- you get a student started, then they gain self-confidence, and it's amazing what we might be able to accomplish.

But we would expand, like, our commercial truck-driving program. Yeah, in one quarter a student can go from no skills, no job to an $18-an-hour job and we're critical shortage. This is it. We have a skills gap. There are jobs going -- begging out there, productivity is being stifled because we don't have workers in some key areas.

This is one that especially is good for returning veterans. And I've talked to, like, instructors in those areas. They say, you know, it takes about five weeks for a veteran to be really able to handle sometimes the expectation of some of these basic short-term programs, so they need this achievement coach. They need the person that's helping them.

And then we'd probably go into the health area, and we'd offer more short-term training, like lobotomy, where a student in just a matter of weeks can go into the health community and make 20 bucks an hour.

I'm not sure what all of those would be, because I would want the information that our researchers here are going to be providing us, you know, on what those job opportunities are and what they pay.

So, now we've spent 900,000. The last hundred thousand (laughter) --

MR. MARSCHALL: Steve, Steve?

MR. VAN AUSDLE: Excuse me?

MR. MARSCHALL: Could we squeeze out a little money for raises for the professors?

(Laughter)

MR. VAN AUSDLE: I would love to. I'm going to ask you for another million in a minute.

I think we're going to have more emerging entrepreneurs -- you know, individuals self-employed. We were working with the Department of Commerce in the state of Washington to create a roll-on entrepreneurship program for the state based in Walla-Walla, because we've got some great models, and I would like to take that hundred thousand dollars and see if I couldn't leverage it and match it to create a program in entrepreneurship for students that are going through some programs. Didn't even think about cosmetology. If they don't have the business side, the odds are that they are really having a career out of their training art is high.

We have a unique program called Farrier.

Does anybody know what that is? These are high-end horseshoers. There are not many around in the country. But if you're good at that, you can make a lot of money, you know. It's programs like that where you've got to have the entrepreneurial side with it.

So, now we've spent a million dollars --

MR. GREENSTONE: Yeah, that was only --.

MR. VAN AUSDLE: And we need about five more million. (Laughter) And my advocate here told me one of my needs.

Mike.

MR. GREENSTONE: Thank you.

So, one theme, Lou, that I think has emerged on the first panel, partially at my prompting, and this panel I think is the potential need for kind of a data revolution so we can actually figure out what's working and what's not. I wonder if you could -- I think a lot of that undergirds your proposal. Maybe you could talk a little bit about the specifics, and could it actually be implemented, or would we need the IRS to issue a ruling or some unlikely thing like that?

MR. JACOBSON: Well, I think is really an excellent question, that I've been privileged to work at the state that has by far the best data. Washington is in second place. Florida is in first place. And when you go to a community college in Florida, very frequently, the person who's in charge of a career education program will say I've been working in this area for 15 years and I'm very interested in helping my students gain access to good jobs, but until recently I didn't know what a good job was. I didn't know -- I could not track my students from the college into the workforce, and of course getting a degree doesn't guarantee you a good job in the United States, as some of our children have found out, unfortunately.

But there are certain career fields that have very high return. So, the simple answer is that Florida has already created exactly the type of data system that I think we've been talking about today in which they have transcript files from high school through college, and then U.I. wage records into the workforce, and they've proven to be very, very effective and useful in terms of giving the people who are running the colleges the information they need. They may have been less applied unless the people from community colleges can ask for special tabulations. The individual consumer could also use these, and that may not have been as emphasized as it might be. But the other Neo-classical academists have to say this, is that the colleges in general do not have strong incentives. Their funding is not tied to the success of their students in the workplace. So, clearly, having the data and then tying their success to the students' success, to the resources that the colleges have at their command would be an incredibly valuable step to take.

MR. GREENSTONE: So, another thing I learned from your proposal was I guess the funding for, let's say -- let me make an extreme example -- a class of Victorian poetry is the same as the funding for a class -- a highly technical class.

MR. JACOBSON: That's correct. One of the first things that most academists would look for is what are the incentives that drive community four-year colleges. And it is generally true that if you're teaching an English class that requires, you know, a modest amount of books and things, the capitation from the state is often about the same as it would be if you were teaching a registered nursing class where the cost is actually very high. So, obviously, what that creates is what economists look for and are fond of talking about reverse incentives, so that a lot of colleges actually are forced into a position where they need to get students to register for the lower-return courses, because otherwise they wouldn't have the resources to fund their higher-return courses -- cross-subsidization. There are a few states that have begun to experiment with ways in which they can reap the line benefits to cost, Tennessee, Michigan I believe are states that have gone in that direction.

But one of the most beneficial trends that I've seen is several states have developed technical colleges as opposed to community colleges. This is where we've been saying that so much in rural areas but in urban areas the transfer bunch and getting kids this two years they need in order to get a four-year degree is extremely important, and there are a lot of requirements in order to get a two-year degree, many of which have very little value in the workplace unless you actually go on to get the four-year degree. So, technical colleges are essentially freeing themselves of this entire range of courses that tend to have low returns, focusing on the career colleges. So, they said there are two different aspects. It's how you fund them and what their mission is.

MR. GREENSTONE: So, Dan, I think the AFL-CIO must have a lot of experience with displaced workers, and I wonder if you could talk a little bit about what it's like -- someone who has invested in a career in a particular industry, developed skills in that industry, and then, you know, due to forces that are beyond their control find that the skills they've developed are, you know, no longer in great demand --

and how the AFL-CIO tries to help its members kind of transition to new opportunities.

MR. MARSCHALL: Well, again, it's a very rough situation for those millions of displaced workers out there, and, I mean, really the optimal kind of solution is for them to be able to go out to receive some unemployment insurance for a while and to identify a job that some way approximates the sort of skills and qualifications that they had before but also pays somewhere close to the previous wages. We all know that can be very difficult. We work closely with our labor members on the workforce investment boards to try to ensure that the activities of the WEA system are responsive to exactly those kinds of concerns and helping workers make connections with, hopefully if in the area, the sort of programs that Rhandi and others run.

So, when it comes down to it, I think dislocate workers basically kind of patch together their solutions, and maybe they're using some of their own funds. Maybe they've had the opportunity to receive some career guidance and some training from the local WEA system, but there are no easy answers, and we'll be learning more about their needs in the next month when tens of thousands of them will be coming to Washington, D.C., to talk to their members of Congress.

MR. GREENSTONE: Okay, Rhandi, I know your organization also has a lot of experience helping displaced workers. I wonder if you could talk a little bit about -- you drew a distinction this morning between the workers who are most likely to succeed in training versus the workers who are most likely to succeed in a new job. How are you trying to identify them and put each on the right path?

MS. BERTH: Well -- and I think that's kind of the role of a sectorial intermediary, and I think Harry mentioned it, too. The case managers at job centers that are paid by their bosses at job centers are not experts in the fields. And the folks in the colleges that are helping with career guidance are really good about knowing what programs the colleges offer and which classrooms, you know, or classes and courses are not full. But that doesn't mean they're very knowledgeable about where the current jobs are, what the current employer needs, and what's happening.

Now, just a caveat is that, you know, people that go to a four-year school come back and go to our two-year colleges, because our two-year colleges are closer connected to the jobs. But I think that with the economy the way it is, you can have, you know, hundreds of people vying for 20 positions, and we don't have any employers calling us saying give me the 20 people that meet the minimum standards for training, you know?

MR. GREENSTONE: Yes.

MS. BERTH: And so we need colleges to allow and offer courses to people that meet the minimum standards for training, but that doesn't maximize their chances of getting a job. So, we've seen a lot of failed projects, because the people that are going into the training don't want to work for the employer who's sponsoring it, or they don't meet the employment needs of the employer who’s sponsoring it, or, you know, something as simple as a drug test. Well, I don’t think a college can put everybody through a drug test before they start a math class, but an employer can put someone through a drug test before they start working for that employer.

So, I think there’s a huge distinction between how do you sort through -- I mean, who does that? -- the most likely to succeed with the employer, and so the rest of the folks can either be eliminating barriers to employment or gaining additional skills so the next time you can have the most likely to succeed, because if you fail the first time you’re going to keep failing, and if you’re successful the first time you’ll keep succeeding.

MR. GREENSTONE: Thanks.

So, I think we’re going to turn to the floor for a minute, but before we do that I just wanted to make sure that no one has anything left unsaid.

MR. JACOBSON: I have one comment.

MR. GREENSTONE: Yeah, you did have your

chance for the one fix to the training programs. Same with Dan.

MR. JACOBSON: Well -- right. Well, the comment I want to make is that I think in our paper we discussed the concept of no free lunch, that the reason that Dan, Bob, and I are sort of like our own proposal is because we think it's actually realistic. When we're talking about dislocated workers who earn $45,000 a year, they're really in a different group of people than the lower-income people that were being addressed in the first panel, that you can give a big step up to a lower-income person with a modest amount of retraining. But for a dislocated worker, they're taking a huge loss and they need a lot of training and in general terms the community colleges have a tremendous number of very valuable programs. But you have to stay in the program long enough to get some training, so you can imagine -- think of your own background. If rather than having advanced degrees, as many of the people here have, think if you only had two years of -- only went to a two-year college and that was it, that the number -- the kinds of jobs you could qualify are limited. So, I think that there is -- I think there's a sense of the panel here that you have to find people who understand that and link them up to the community colleges or for-profits that can provide this training and then make sure that those programs are linked to good jobs.

MR. GREENSTONE: All right, Dan, you get to change one thing about the workforce transition, especially for displaced workers. And it can't be support for Lou's proposal, which you've already passed to Congress.

MR. MARSCHALL: I guess I would propose a change at the administrative sort of level and have resources available on a long-term basis for the Department of Labor and the federal government to provide incentives and collecting best practices to create these sector partnerships composed of employers, unions, community-based organizations, community colleges, et cetera.

I think that a limited amount of federal funds could really leverage a tremendous amount of activity at the local building on the model of the WRTP and other groups like the District 1199C Training and Upgrading Fund in Philadelphia, which works in the health care area, involves 52 employers, has been around for many, many years, and both create customized classes. They have their own learning center and work with community colleges and technical schools. But that would be a very useful advancement.

MR. GREENSTONE: Okay, so we'll start to turn to the questions. The first is, Dan, why don't you speak to the relevant importance of soft skills training, and are there successful models of this that can be highlighted? Now, I think soft skills -- is that EQ, according to Oprah? (Laughter).

Dan, how does that relate to the fact that our five-year-old and nine-year-old are tremendous advocates for whatever they need at the particular moment?

MR. MARSCHALL: Well, what's interesting about this discussion -- this is really the first --

we’re going back to the first panel now. We’ve got people who’ve never actually held a high-paying job.

Many recent high-school graduates, as we know, have no what we might call trade skills, but the employers complain all the time that they have no soft skills. In other words, they don’t come to work on time; they don’t dress appropriately; and they need a lot of coaching that tends not be provided in the public institutions. So, I would say what’s interesting about this is some of the for-profits make a big deal about this, that if they admit you into the program, which they’re readily willing to do, they really do expect you to show up for the school looking like you’re ready to work and that, you know, attendance is very important. So, I think that much more attention should be given to these soft skills at the public institutions.

MR. GREENSTONE: You know, this is a -- I just want to -- you raise a very important, timely issue of the for-profit schools. They’ve been quite controversial in the last several months. I wonder if anyone wanted to talk about the for-profit schools and what their experiences with them have been and how they fit into this larger web of training.

MS. BERTH: Well, I think back to the soft skills, we have a thing we call essential skills, because there are some generic work-ethic type things that just are not industry specific, and then there are certain things that are industry specific. And sometimes we have to undo what they were taught before.

For our model, we subcontract to the most appropriate training provider, and in some cases that is a private institution or someone that the employer is very comfortable with or pieces of equipment that are unusual or, you know --

MR. GREENSTONE: Yeah.

MS. BERTH: So, I think it's -- they're not open to the public like our public institutions, and I don't think you can invest in them in the same way. You need to invest in the regular community colleges.

MR. GREENSTONE: Dan?

MR. MARSCHALL: I'd say 10 years ago about 2 percent of all college students attended for-profits, and now it's 9 percent, and the reason for this is that the government is not investing enough of our money into the post-secondary education system so that, as we have heard here, there are some extremely high-return programs. But they're very expensive, so that entrepreneurs today are looking for opportunities to actually make these investments. Health care is the big area, but -- I mean -- and IT is a big area, so that even though the for-profits are often all bunched together and the public image might be that they're all nefarious, that there are bad for-profits just as there are bad public institutions, but by and large many of these for-profits are providing an enormously valuable service. And I hate to say this, but the actual total cost of the education of for-profit is lower than that of community college. The fact is community colleges are getting two-thirds of their money from the taxpayers.

MR. VAN AUSDLE: Michael?

MR. GREENSTONE: Yes? I suspect that you might have something to say.

MR. VAN AUSDLE: I've got something to say on that.

First thing -- I'm sitting here thinking where our country is right now, and never I think has it been more in the nation's interest than to invest in our workforce development system. I mean, that's the big picture. We've got to have productivity if we're going to compete in the global economy, and we need to do it now. And our system is underfunded. We do to strengthen what we have, and then we need to build capacity in the public education system. And it's not just at the two-year level. This is the four-year level, too.

I participated in an interesting study in our state. Former president of the University of Washington and I chaired a committee, and we looked at the workforce system through an economic lens. How well matched was it with the economic system? Not very good. Not very good. Washington State imports

92 workers for every 100 we grow our own. We are importing workers; they're getting harder to find. If you can't find workers, your productivity goes down. And I agree with some of the things that I've heard from you and Harry that the more education and training you do, you're actually increasing jobs when you invest in the public workforce development system.

We've got to have the soft skills. You know, our country's changed. It used to be, in the old days, we had opportunity to work. Not many of our children do anymore, so they bring very little to the table. So, we need work study programs. We need programs that assimilate work life. We need to hold them to high expectations. The necessary condition is these soft skills. What that means is you need also integrated programs. You've got to integrate that into your workforce skills or you stretch the program too long.

And to the point in your paper, we have a gap. We have these high-tenure displaced workers coming in the door, and they run out of money about the end of year one or end of the third quarter and have to go to work. So, they don't get the benefit of that value-added of continuing the program. And basically you're providing a policy that provides support to get him across the finish line. Your policy would help our completion agenda.

MR. GREENSTONE: Okay, here's a question that I've wondered about. By focusing on reemployed dislocated workers, Lou, how does your proposal compare to strict wage insurance?

MR. JACOBSON: Oh, well, it's totally different from strict wage insurance.

MR. GREENSTONE: Thank you.

MR. JACOBSON: (Laughter) I mean, the big difference is that -- and I think this may not be the most popular statement I've ever made, but people actually like to work. I've observed people who are unemployed, and they're not very happy, so that I think what's important is to put people back to work. And if you can do it through training, that's way better than giving them, let's say, infinitely extended unemployment insurance. So, economists sort of like wage insurance, because it actually affects every worker. In other words, not every worker is in a position to benefit from retraining, that in our study the people in Seattle had much higher returns than people in rural areas. But on the other hand, investments in training have the high payoff for everyone. So, you know, they're just different concepts, and there's something to be spoken through each one of them. But I think that what's really important is for people -- say, if you're in your 40s and you've lost a high-paying job and you have kids in college that you not only are able to support your family but you're actually doing something that you feel is personally worthwhile. I think that's very important.

MR. GREENSTONE: Okay. I want everyone -- this was another fascinating discussion, and I hope everyone can join me in thanking our fabulous participants.

MR. ALTMAN: Without a break, we are now

fortunate enough to have the Honorable Senator Patty Murray from Washington.

You can see that we're organizing this so that not a single one of you is allowed to even get up. (Laughter)

Hi, everybody. I'm Roger Altman. I have the pleasure of introducing Senator Patty Murray. And it's particularly fortunate that she's kindly joining us because she is the chair of the Senate Subcommittee on Employment and Workplace Safety, which is obviously central to this question of training. And it's particularly good, therefore, that she's with us.

Senator Murray is presently serving her fourth term in the Senate. And for those of you who remember the rather extraordinary circumstances which gave rise to her originally joining the Senate, that's rather amazing. She has been a pioneer in a lot of respects, including the first woman to chair the Veterans Committee. She's also currently the chairman of the Democratic Senatorial Campaign Committee and, if you look closely, you'll see that she's doing quite a job recruiting women to run next November for the Senate. And it's going to be quite an interesting line-up of female Democratic candidates. She's really done an amazing job in that regard and, whatever your political persuasion, I think it's pretty impressive.

Senator Murray also just completed a tour of duty which may have rivaled Afghanistan -- (Laughter) -- as co-chair of the supercommittee. And I think she's due a lot of credit for taking that job on and I'm sure if we had a lot more time today we could ask you many, many, many questions about that. But it's my particular pleasure to introduce Senator Patty Murray. (Applause)

SENATOR MURRAY: Wow, Roger, thank you so much for that kind introduction. It's great to see you here today. I want to thank Michael Greenstone and the entire staff of the Hamilton Project for the invitation to speak with all of you. And I especially want to recognize Steve VanAusdle, president of Walla Walla Community College. I am glad that all of you are getting the chance to really know what we in

Washington state have known for a very long time, that Steve and Walla Walla are stars in our nation's education and training system and their innovative work is really one of the reasons why Walla Walla Community College is one the top 10 finalists for the Aspen Prize for Community College Excellence. So, Steve, we're all with you on that.

And I understand that he fully told you all about the great wine industry in our state, so I don't have to tell all of you. You can come visit him any time and he will let you see some great things and do a little wine sipping at the same time. So it's great to see you here.

Well, you are all here today to talk about how we make sure that our workers are getting the skills and the training they need to fill the jobs of the 21st century economy. There are few issues, in my opinion, that are more critical than this one for the future of the middle class of America. But before I speak to that, I do want to talk about my tour in Afghanistan: chairing the last few months of the

Joint Select Committee on Deficit Reduction because I really believe that the choices that the committee faced are very much connected to the other choices that we need to make as a nation. And the challenges that we faced in getting a bipartisan deal are not going to go away.

I accepted the job of co-chairing this committee at a time when we all know that the middle class in this country is really struggling. Over the past three months I have heard from many, many people. I heard first had from families in my home state of Washington that were fighting just to stay in their homes. I talked to workers who'd been unemployed for a very long time and where really desperate to get back on the job. I talked to a lot of small business owners who were losing money every single month and wondering how much longer they were going to be able to keep their business doors open.

And again and again I heard from just regular moms and dads who were truly afraid about the kind of country that we were going to be leaving for their children. Everywhere I went I heard from people who simply wanted their government to work. They're tired of the partisan rancor that seems to dominate this city. They were sick of the gridlock that seems to prevent any progress from being made on critical issues. And they were really desperate for their representatives in government to come together to solve the problems facing our country. They were frustrated because everyday Americans understand out shared values.

Democrats, Republicans, Independents -- they understand there is so much more that unites us in this country than divides us. I think everybody at the Hamilton Project really understands that. You've built a fantastic organization around that principle. But, unfortunately, those common values don't always translate into bipartisan action here in the nation's capital.

From the moment I joined that committee my priorities were really clear. I wanted to help demonstrate to our fellow citizens that our democracy could work for the. And I wanted to make sure that any deal that our committee came together with was fair and balanced, that it called for sacrifices to be shared by everyone in facing this big challenge in front of us, and that it didn't just simply push the entire burden on to our middle class families today.

Throughout the entire negotiations my fellow Democrats and I made it very clear that we were willing to make some deep and painful concessions and compromise to get to what we wanted to get to: a fair and balanced, bipartisan deal. We were willing to go so far as to allow Medicare or the safety net that families and children rely on be privatized or dismantled, but we put some very serious offers on the table to reduce spending and strengthen the entitlement programs while reducing their costs over the long run.

In fact, you should know that one proposal that I made to my co-chair matched the Republicans' offer on spending and entitlements dollar for dollar, not policy for policy, but we agreed to cuts as steep as they were asking. However, again, we just were not willing to allow the entire deficit issue to be put solely on the back of our seniors, middle class, and most vulnerable Americans.

We were willing to make compromises, but we wanted to make those in the context of an entire plan that was balanced, that asked all Americans to share that sacrifice. And, by the way, we were in very good company. Every single bipartisan group that has examined this issue has concluded that there needs to be a balanced approach that tackles both the spending and the revenue. We felt very strongly that the wealthiest Americans and biggest corporations should share in that sacrifice and bear some of the burden of reducing the debt and deficit.

In fact, it’s so obvious to me that this should even have been up for debate. When our country faces serious problems, in every single generation that has come, every American has been expected to stand up and help and they’ve done so. So, in this time when a lot of American families are struggling, we thought it more than fair to ask that those Americans who've done the best financially pay a little bit more as part of the solution, especially after they've been benefiting for years from the lowest tax rates in generations.

While we were working hard to scour the federal programs that families rely on for any hint of fat to trim, we thought it would be more than fair to scour the tax code in just the same way and eliminate egregious loopholes the wealthiest Americans use to reduce their tax debt today. At a time when some of the biggest and most profitable corporations use shelters and loopholes to bring their taxes down to literally nothing in some cases, we thought it was only fair to ask them to contribute at a time when our nation was suffering.

Oil and gas companies are making record profits today. We believe it made sense to end the handouts they get from taxpayers. And I think that the vast majority of Americans are saying that is fair. But, unfortunately, our Republican counterparts on the committee weren't willing to put that kind of tax revenue on the table to get to a bipartisan deal. They wanted deficit reduction to simply be about cutting spending and slashing entitlements.

So, to be very clear, that is where the negotiations broke down at the end of the day. That was the sticking point. As Democrats we put serious compromises on the table when it came to the programs that we cared a lot about and felt passionately about, but those on the other side were just unwilling to ask the wealthiest Americans and biggest corporations to contribute to this as well.

So that is why we came to where we did at this time. But, you know, to me this was really about choices and priorities. Do we ask seniors to pay more for health care before calling on all Americans to pay their fair share? Do we slash housing assistance for low-income families who are struggling today without ending loopholes for our biggest corporations? Do we cut training and education programs and not end the handouts for big oil and gas companies? Those were the kinds of questions that I felt needed to be answered and we were unable to do so.

You know, I was brought up to believe that our government can be a good force for this country. Strong government programs happened to be there for my family when I was growing up. My dad was diagnosed with multiple sclerosis and had to quit his job and my mom, fortunately, had a government program that she could use to go back to a community college and get an education and get a job, so that she could put food on the table for our family of nine. She got the skills and support she needed because our country, our government, was there for her. Programs like that have been there for millions of families across America over many generations and I've fought every day in the Senate to make sure they are there for generations to come.

Which brings me to today's topic, the choices we need to make as a nation to invest in our workers and make sure they are prepared to fill the 21st century jobs that our country needs to create.

Because as any business owner will tell you -- and as I'm sure Roger and Eric can confirm -- you can't simply slash your way to success. You have to invest in the assets you're going to need. And for our nation there is no more important asset than our workers.

A skilled and educated workforce has been the force behind the greatest economy and most robust middle class the world has ever known. More families have been able to propel themselves upward in America than anywhere else, and much of that is traced back to our education and training that our worker's have been empowered with.

But, unfortunately, as all of you know, our middle class is facing challenges like never before. Our workers are still the best in the world, but, unfortunately, our education and skills training system is no longer meeting their needs in a very rapidly changing economy. I do chair the Senate subcommittee that oversees worker training. I've been working on this issue for many years and I know a lot of you in this room have as well. So I wanted to give you some of the key principles I believe need to underpin our nation's education and training systems and policies. And underlying all of them is a very basic idea: We need to start engaging our workers early and we need to keep going. Our young people need to start off on the right path and we need to continue investing in their skills into adulthood and throughout their careers.

So, first of all, we need to have an effective early childhood education. It's very critical to us. Then we need our students who are middle and high school to pick up the knowledge and skills that they need to succeed in local businesses in their own communities. And we need to make sure that by the time our students finish high school that they are on a path towards a career or a postsecondary education or both.

Once they are in the workforce, we need to have timely, efficient, and effective retraining opportunities available that combine the ability to earn and learn at the same time, that integrate classroom and work-based learning and that can respond to and help shape local regional economic development and growth strategies.

We also really need to push for coordination. Programs in every state need to work together to develop unified plans to make sure they are effectively meeting the needs of their own local workers and employers in supporting their economic development goals.

And finally and importantly, we need to continually analyze and identify programs and strategies that work best using common performance metrics, and be willing to close down the programs that don't work. Our employers, our industries, and our economy are dynamic, and our education and training programs must be able to grow and change with them. Those are the principles that I think need to guide us.

But it's going to take more than principles. It's going to take a real commitment and a very serious investment. We cannot train our workers on the cheap. And we can't continue to choke off funding for the programs that many of them depend on. Last year's budget proposal from the House Republicans eliminated workforce development programs, closed thousands of one-stop career centers, shut down Job Corps centers, and slashed funding for Pell Grants. That's the wrong direction.

We were able to stop that in the Senate, but these kinds of ideas continue to come at us and we have to be diligent in making sure that those investments are not cut off today. I know better than anybody that we need to cut spending and reduce the deficit. I spent three months going through program by program to see where we could make these cuts. I know full well the impact on our economy if we don't deal with that critical issue. But I know as much as anything that we can't do it on the back of our workers and the future of our economy.

And because I care deeply about the effectiveness of our worker training programs, I believe that we need to keep pushing them to improve so that they serve our workers, our businesses, and our communities even better. And that's where I believe all of you are going to play a very critical role.

I'll keep fighting for these issues in the Senate, and I think we're going to win some of these battles because, frankly, I think the American people understand that and they want us to, but it is not going to be easy. And we're not always going to be able to move as quickly as I believe we need to do, which is why, really, the work being done outside of Congress is going to be absolutely essential.

I know that Hamilton is bringing together some of the leading thinkers to talk about how we restart our economy and rebuild the skill base of our workforce and put America back to work. In fact, I was pleased to see that the papers that were presented here today work really well with some of the policies and bills that I've introduced recently. But if we can't always get the other side to work with us on getting this right, then it's going to be even more important for Hamilton and Georgetown and Aspen and Walla Walla and Siemens and others to step up and fill that void, to make sure we have the policies and systems and programs in place at every level to meet our emerging needs, that we're getting the most out of and delivering the most to employers and educational institutions and community based organizations and philanthropy and the public sector, and that we have the financial mechanisms in place to meet our needs in times of growth as well as during recession.

It's going to take smart policies. It's going to take a long-term focus. It's going to take collective commitment and setting aside politics as usual, which all happen to be things that the Hamilton Project is good at.

So I want you to know I'm going to keep working with you. I'm confident you're going to be stepping up because you know what I know: the future of the middle class in America depends on us getting this issue right.

And, finally, once again, this is about choices. And, you know, that's really what budgets are all about. It's what the supercommittee was all about. It's about what government is all about at the end of the day. We need to make some choices as a nation about what we want our country to look like 5 years from now, 20 years from now, 50 years from now. We need to decide whether we're going to make the choices that are required to leave our children and grandchildren a better country than the one that we were left. Are we going to drop the ball? Are we going to share the sacrifices that this moment calls for? Or are we going to allow middle class families and the most vulnerable Americans to bear the brunt of this?

My view is really clear on this, and I know I share it with many of you in this room. We need policies that boost this economy, that create jobs, and ensure prosperity is shared with the middle class families and workers who really move our nation forward.

Investing in our worker training and education is a huge part of that and so is making sure our fiscal house is put in order in a fair and balanced way. You know, when the supercommittee wrapped up without a final deal, I was personally so disappointed. It was a tough, long ride home across the nation after that. I worked very, very hard with our committee to try and get a balanced and bipartisan deal. I wanted to meet our deadline with a good goal. I especially was disappointed that one of the goals I had, which was to make sure that the country knew that our government could work, felt like we had tripped badly.

But I end this process having learned a tremendous amount, having become much more clear about what we need to do. And I don't feel like I ended a process, but really began a process to really show our country that we can step up when our challenges are tough and that we can do it right and we have to keep going. And that's the commitment I have.

So, I appreciate all of you being here. And before I end, I do want to note that one of the national leaders in worker training has been Siemens. They employ more than 62,000 workers, 1,100 of them in my home state. They have told us that they have thousands of job openings in this country. They're aggressively working to fill those positions. They're like a lot of other companies that I talk to, they have open positions. We have workers who want jobs. We've got to fill that gap. And I urge all of you to keep working on this. It is absolutely essential to getting our country back on track.

I do have to get back to the Senate to work on the bill in front of us, so I can't stay for the next panel. I've asked my staff to stay because I know you're going to come up with a lot of great ideas and I want to work with all of you. But I do want all of you to know, and to all those people, media and likewise who have said to me does this mean our country doesn't work? No, it means that a democracy is hard work and all of us have to participate. Thank you. (Applause)

MR. ALTMAN: Thanks to Senator Murray. You are still not allowed to move because we're going to proceed right now with our final segment here, the discussion with Eric Spiegel. Thanks for joining us.

MR. SPIEGEL: Thanks. I just want to start off by saying we paid a lot of taxes last year.

MR. ALTMAN: Well, sir, I did, too. Before we get into what you might call the meat and potatoes of this, following up with the strategy paper and the two panels this morning in talking about how these issues in the U.S. pertain to Siemens, I want to start off with a question about Germany. Now you grew up in this country, went to school in this country, and so forth, but of course, Siemens is headquartered in Germany. And one hears a tremendous amount about the German model as it relates to apprenticeship, as it relates to business labor relations, as it relates to the way Germany responded to the financial crisis and the great recession, many times arguably better than the United States did in terms of reducing hours but not reducing employment. So I'd like to start off with a question about whether you think as you run this large business in the United States, but are also part of this German-based corporation, whether you think the German model first is in many respects better than ours in the ways I just mentioned. And second, can it be in large measure or cannot it be transported here?

MR. SPIEGEL: Right. As to whether it's better or not I think is a pretty complicated question, but let me just address the issue about how it's worked and why it's been successful and what can be transported.

I think there are three or four things that I've noticed in my years at Siemens and spending a lot of time in Germany and also getting good perspective on our business there, but also what other businesses are doing. One is they take a very long-term perspective. I was a consultant around the world for many years and one thing that is very striking is they don't look quarter to quarter; they look out a long, long way. And so in all the decision making that

Siemens makes, but I also see across the country, they're taking that long-term perspective, which I don't see in many companies in this country. And I don't even see it from the federal government.

Second thing is they have much better relations with the works councils, the unions. I was very surprised, in fact, I've had many of the works council members from Siemens come over to visit and spend time here. And they're always shocked at the state of relationships between unions and companies here. Over there as you know during the recession as you mentioned, they agreed to cut back work hours for all workers so that they could maintain their jobs and continue working. But also in terms of a lot of the issues we're talking about here today in terms of skills development, they take a look at where the world is headed, what kinds of technologies are being developed, what kinds of capabilities and skills are needed. And they work very closely with us at Siemens to make sure that their people have the required training, and also that the workers know that they've got to continue to go through that training so that they can keep up with where we're going and where the business and the global economy are going. So that interaction plays not just in terms of things like work hours and work policies, but also in terms of this skills issue that exists.

I think the third major area is despite the downturn, we didn't cut any R&D. And I think most German companies did not cut R&D. In fact, we saw it as an opportunity over that two-year period to really gain a lot of ground on a lot of our competitors around the world because we kept spending. We've always spent at about 6 or 7 percent of revenue. We still during the recession spent about $6 billion. In the U.S. the last 2 years, we spent over $1 billion, $1.2 billion, $1.3 billion on R&D despite the downturn. And for a lot of companies, they see it as an easy thing to cut. Okay, let's cut that in half and we'll bring it back when it starts. The problem is you lose momentum; you lose the talent because the talent goes to find something else; and you don't keep making the progress going forward.

So I think all of those things I see are really deeply engrained in the DNA of companies like Siemens and a lot of the German companies. I don't see that same kind of DNA here.

And you mentioned the apprentice program. I think it's one of the most amazing things I've ever seen. At any one time, we average about 10,000 people that we're apprenticing at Siemens -- 10,000 people in German. Those people we hire primarily out of the high school equivalent. The programs last about three-and-one-half years on average. They go to school part time. They work part time, so they get paid while they're going through it. And they come out with degrees, different types of degrees, but they've also been working in our factories and our plants in operations. And 80 to 90 percent get hired directly into our company, but also into other companies on an ongoing basis. So at any one time, we're graduating 2,500 to 3,000 or so of those people every year. They're going out into the workforce.

Many of the senior executives in Siemens around the world went through that program. So it's not like you had to say you went and got a business degree, you went and got a master's in engineering or something, and that's the total top management team. A lot of the top management team around the world came up through that kind of a program. I don't see the kind of interest for those kinds of major programs. If you take a look at the size of that apprentice program in Germany, it's a very large program across the whole country, and it leads to very good results. So we have people coming out who are actually in lockstep with where the technology is going because if you take a look at a lot of the businesses or in a lot of the plants, in five years' time those plants have been revamped and remodeled. The technology has changed. You can't just keep people working in the same plant. They have to keep learning and developing and training. I think that's one of the big issues I see here is that we've fallen behind in many of those areas.

MR. ALTMAN: Let me ask you about your area of responsibility in the United States and in particular this large manufacturing facility, gas turbine facility that you've opened in Charlotte. And there as well as around the rest of the country you've made very clear that there are -- the entire country -- there are about 3,000 skilled positions that Siemens is trying to fill that aren't currently filled. And I saw that you had inaugurated an apprenticeship program in Charlotte, initially fairly small, and I also saw that Siemens had estimated it was going to spend $127,000 over the period of the apprenticeship on each of the people in it.

MR. SPIEGEL: Right.

MR. ALTMAN: I wanted to ask you about that, number one, the figure itself. Does that take into account the fact that they're also working for you at the time and the wages in effect that they would otherwise earn by virtue of working with you? How do we understand that figure?

MR. SPIEGEL: I'm not sure of all the exact components; I can tell you the major chunks of it.

MR. ALTMAN: It sounds like a lot of money.

MR. SPIEGEL: Yeah. Again, it's about a three-and-a-half year program. It's with the Central Piedmont Community College. I forget how many people we have going through it now, but the idea there is they're going to school more than half time. They're working at the plant 30, 40 percent of the time. They get paid for that time in total. But we've also invested quite a bit of money with the community college in developing the curriculum and actually bringing people over from Germany to help develop that curriculum. And so while they're going to school, they're getting paid and they're getting developed in specific areas within a plant.

The program we have right now comes out with a mechatronics degree in technology, so they learn mechanical engineering, electronics, computer science, system engineering and design, all of those things during that period. So I don't know whether it includes the compensation they get or whatever, but the total program over that period is about $127,000.

The average employee, by the way, coming out of that, people we're hiring into that plant -- we just hired to start up the plant 1,000 new employees, which will create 2,000 more jobs in the area -- the average job there is over $70,000. So these are very high paying. These are the kinds of jobs I think we want to bring to this country, but right now 70 percent of them require some type of degree. And this would be one type of degree that would be working in a plant, but this is a new program we're developing.

MR. ALTMAN: And one of the aspects of this is a statement I saw that Siemens made that only one out of ten applicants for these types of jobs we're talking about today had the requisite math and computer skills necessary to qualify right off the bat. Tell us a little bit about what those math and computer skills are because that will play back into what we were talking about this morning in terms of the role of community colleges, the role of other education methods to train people up to that degree.

MR. SPIEGEL: Right. So this plant we're building in Charlotte -- just to give you a little background on the plant so people can understand -- it's the largest gas turbine plant in North America. It's the most automated gas turbine plant in the world. And it's building the world's most high efficiency H-frame gas turbines. And part of the reason why we're building it is because, of course, we've got a lot of gas here in the country now and the price of gas is low. We have a lot of aging coal plants, and we see there's going to be a lot of conversion. And so we see the need for more capacity, but also we see a big opportunity for exports. So as we start to build this, this plant can produce turbines at a lower cost than any plant we have in the world, including Germany and China. So one thing we're saying is you can reinvigorate manufacturing in this country, and this country can be more than competitive with any country in the world in terms of building the latest technology.

MR. ALTMAN: Well, let's stop on that a

second because I think that's really a headline. So this plant can produce turbines cheaper than any plant in the world, including China and Germany. Now let's understand a little bit for a second why that is. Presumably some of that has to do with the technology of the plant itself. It's the most modern and technologically advanced plant.

MR. SPIEGEL: That's a big part of it.

MR. ALTMAN: And how labor intensive is it?

MR. SPIEGEL: Well, we're bringing on 1,000 new employees so it does, but it's not as labor intensive obviously as a plant that would have been built 10 or 15 years ago. So it's got the latest industrial automation in this plant, which gets back to the issue about the types of people. But all the process is automated so it requires computer skills. People have to make decisions based on what the machinery is saying. It's really the production workers on the floor have to be fairly sophisticated to operate this equipment and get the kind of productivity and output that we want.

We've also implemented the latest lean manufacturing technologies in terms of the utilization of labor and machinery and space in the plant and also the supply chain and how it works its way through the plant and things like that. So it's a very sophisticated -- not only is the technology sophisticated, but the process being used there is very sophisticated, which is why the output is so high, the productivity is so high. And so despite the fact that it has 1,000 workers in the plant, it can still produce turbines much more efficiently than other plants around the world. But it does require -- and the jobs are very high-paying jobs -- it does require a certain level of education and experience with the technologies around the process and also just the lean technology. So that's what these people going through the apprentice process -- now we did have trouble hiring people. So only one in ten that we interviewed actually could qualify to get into the training program, which is a different thing. A lot of the workers there have been in other industries, but they had worked with this exact kind of technology or this sophisticated of technology.

So we've had a one-year training program and the plant just opened two weeks ago. I went down to the grand opening. We've had people actually working there for a year side by side with people getting trained. We brought people over from Germany.

MR. ALTMAN: Let me ask this question. You located that plant there for a variety of reasons, but one of them had to be the university concentration.

MR. SPIEGEL: Yep.

MR. ALTMAN: In that area you have the University of North Carolina. You have a lot of great educational institutions right around there.

MR. SPIEGEL: Right.

MR. ALTMAN: So maybe I'm -- I'm sure I'm misunderstanding here something. I'm surprised at that because I would have thought there'd been a supply, I mean a built-in supply of relatively educated laborers, especially given the compensation level you talked about, which would have been available given the location of the facility. Now there's something wrong with that. I mean, obviously there wasn't, but why would that be?

MR. SPEIGEL: Well, I think this skills gap, it's not just that people don't have enough training, it's oftentimes people don't have the right kinds of training. So one of the other programs we're putting in place is a program called EPIC with the University of North Carolina in Charlotte where we're actually developing an energy engineering program. Again, we brought over help to develop a curriculum. I mean, there aren't people in this company being trained on how to do engineering or run a gas turbine facility. We have been making a lot of gas turbines in this country in the last decades. Sort of like if you look for nuclear engineers in this country, you're not going to find a lot of nuclear engineers. So people may have an engineering degree, but they haven't been trained on this particular technology and this particular type of equipment.

Also one of the things we find -- I'll give you a good example. We have a thing called the Siemens Foundation, which has the biggest competition for high school students around STEM -- science, technology, engineering, and math. The finals are going to be actually here in Washington, but MIT is one of the schools that works with us -- Georgia Tech, Notre Dame, University of Texas, Caltech. The projects that these students work on to win this thing are incredible. Where do they all go to school? They all go to school at Harvard and MIT. What luck do we have hiring people at Harvard and MIT who are going to want to go to work at a plant in Charlotte? Very low, and this is the problem with a lot of the people coming out of the universities and things. They don’t want to be working on a plant floor. They want to be working in an ivory tower somewhere. And so there’s really got to be more of a focus on developing people who want to come out and take these technology jobs on a plant floor, reinvigorating manufacturing in this company. And a $70,000, $75,000 a year is a hell of a good job.

But that's not what a lot of us were told when we went off to college by our parents. I know what I was told when I went off. You're going to go off to college. You're going to get a degree. You're going to get a really high-paying job somewhere. You're not going to have to work in a plant like I did. Both my grandfathers emigrated from Germany. They both worked in steel mills their whole life. I grew up in Youngstown, Ohio. And their whole life was around making sure their kids and their grandkids got to better schools to get better jobs and didn't have to go to work in a steel mill.

And that's a fundamental problem, I think, we find in a lot of people that we interview and recruit. If you go to the schools and get these kids out of the big universities who have engineering degrees, do they want to go to work on plant floor? That's one of the reasons it works in Germany.

MR. ALTMAN: I suspect there's quite a bit of misunderstanding as to what it means to work in this gas turbine facility though?

MR. SPIEGEL: Yeah, absolutely.

MR. ALTMAN: I mean, I think a lot of people who once they walked in would realize --

MR. SPIEGEL: Absolutely, it's a whole different world.

MR. ALTMAN: It's an awful lot different than in a 1960s steel mill.

MR. SPIEGEL: But I think there is some of that stigma. The word "apprentice" we find gets a negative reaction from people as well, the whole idea of apprenticing. It sounds like we're back in the feudal times or something. Am I going to learn to lay bricks or am I going to learn to build a house or whatever. Is it -- I'm going to college. I want a really high-quality job.

So I think some of those things slow the program down a bit. And so you say the mismatch is great universities. We've developed this program with the University of North Carolina in Charlotte, and we've invested I think several million dollars in that program actually with the curriculum and the materials and actually the equipment required and things like that. And those people are going to be -- that's a co-op program, so they're going to be co-oping for various semesters or quarters during their four years in college. But that's a new program. They didn't have a program like that, and we picked that university because it's located very close to the plant.

But we have the same problem across other facilities. We have the only light-rail train manufacturing facility in the U.S. in Sacramento. They've had the same problem. I always get asked by people on the Hill. I go over and they say, hey, if we build high-speed rail in this country, will you build a plant here? I say, well, there's two issues. First of all, you can't just build one. You've got to build a lot of them, otherwise it's not worth building a manufacturing facility. But the second thing is you've got to have people who can actually work in a high-speed rail manufacturing facility. We don't have any in this country, and so we don't have people who can work in that high-speed. So you have to go through the same process.

And I think one of the bigger problems for this country is we really want to drive growth. We've got to start focusing on getting into the industries and businesses in manufacturing here in areas that are going to create the higher technology manufacturing jobs. The jobs that we've lost -- somebody mentioned 50,000 manufacturing plants over the last 10 years. I totally agree. I mean, we've lost a lot of manufacturing jobs. I'm here to tell you a lot of those aren't coming back. A lot of those, those low-tech manufacturing jobs, the economics don't make sense in this country anymore. Why does Charlotte make sense? It's very high-tech manufacturing, but it also creates the kind of jobs we want, high-paying jobs, which I see in the study that's been done are the kinds of jobs we want to have. But we've got to invest in those technologies.

If you take a look at a lot of the technologies that we're selling around the world, we're the world's number one player in offshore wind. We haven't built an offshore wind plant in this country yet. We're number one in high-speed rail in the world. We haven't built a high-speed rail in this country, but China bought 20 train sets. Russia bought 20 train sets. The Europeans have 30 or 40 train sets. We're building offshore wind all over Europe and Asia, nothing in the U.S. yet. We've got one project that is nine years in the making to get it through.

So if you take a look, where is a lot of the new technology that's creating the kind of jobs that we want? This gas turbine is the world's most efficient gas turbine plant. The reason we put it here is we think there's going to be a big opportunity for gas turbines in this country with the low-price gas that didn't exist and people didn't see five years ago, and also we have a lot of aging plants.

So you've got to create the potential for these kinds of jobs, otherwise we're going to fall behind. We finally have some wind plants. We've built two wind plants in this country in the last three years, one in Fort Madison and one in Hudson, Kansas, that have created over 1,200 jobs. But this country isn't a leader in wind technology. The Europeans are the leaders in wind technology, the Danish. A little country like Denmark has been the world leader in developing wind technology.

MR. ALTMAN: Capitol Hill is a leader in wind technology. It's just a different kind of wind.

MR. SPIEGEL: So I think it's not just about getting people trained in the skilled jobs, we've got to create the growth that will allow people to build these plants that create the opportunities for those jobs. I always say -- I get asked by people on Capitol Hill what do you need to do, Eric, to create more jobs? And I say well, first of all, nowhere on my objectives does it say one of my objectives is to create more jobs. The managing board of Siemens doesn't look to me and say, Eric, how many jobs did you create this year? That's not one of my metrics. I create jobs when there are growth opportunities. We make investments against those growth opportunities, and then we hire more people. So you’ve got to create the policies and the environment that are going to allow people to make investments and create growth.

Last year Siemens in the U.S., our orders grew by 8 percent and sales grew by 12 percent, record profits, but it isn’t just profits and no growth. We’re seeing a lot of growth, and that’s because we’ve made a lot of investments in areas where we see big opportunities here in the U.S. And there are a lot of those opportunities, but you’ve got to have the right policies and programs in place to encourage that investment.

MR. ALTMAN: Okay, let’s turn to some questions. And I know Bob Rubin has the first one.

MR. RUBIN: I was frantically writing, Eric. My question is this: When you talked about the experiences that you’ve drawn from having observed what’s happening in Germany, it seemed to me there’s an awful lot that could be very constructive here. When you talk to your fellow CEOs, when you talk to

American business people about the experiences that you've had with labor relations, apprenticeship programs, and the like, what is their reaction?

MR. SPIEGEL: I think mixed. I think a lot of companies in the U.S. have become too reliant on the system to produce what they need, that what I need will be there. And if you're not really driving the innovation curve and you're not developing a lot of these new technologies, you're probably pretty much okay with what's already out there. But when I talk to CEOs who are in businesses that are driving a lot of change and developing new industries and new technologies, that's where you start to see the skills gap. That's where the gap really exists. So I think there's really two types of worlds, two types of CEOs: the ones that are really trying to drive the cutting edge, they are seeing the skills gap, and the further you get from what's out there today, the bigger the gap becomes for people.

But I think more and more I'm hearing about this gap. I mean, I've done a number of interviews around this and panels with other companies, and there are a lot of companies that in specific niches of their business are having similar kinds of problems.

MR. ALTMAN: Eric, let me ask you this question which came from the audience. It's a good one. To what degree does German secondary school education -- let's talk about high schools, for example -- prepare young people in Germany better for high-skilled jobs of the type you're talking about than our secondary education structure in the United States or is there a difference?

MR. SPIEGEL: Probably not an area that I'm an expert on. I would just say because of the numbers of people -- they obviously don't have any trouble in Germany finding -- but I think the interesting story in Charlotte where we have started this apprentice program is they were taken out of a couple of local high schools where the kind of underprivileged area kids would have trouble maybe paying for college, but yet were performing pretty well in school, maybe not at the top of their class but performing pretty well, had the aptitude for what it takes, but maybe aren't from families that maybe aren't going to have the kind of money to go away to school. And we targeted -- for the first wave of those, we targeted those kinds of kids. And obviously they had to take an aptitude test and things like that. But I didn't hear any feedback from Germany that the people we were putting in that program were any more or less qualified. I didn't hear that. I don't know if you expanded it to 10,000 people whether you would have issues.

I think where you might run into problems eventually is the point I made before, which is are there enough kids willing to go into -- who have the aptitude -- willing to go into a program like this as opposed to go off to college for four years? I don't know the answer to that. Again, this apprentice thing is engrained in sort of the culture of Germany, and it's seen as a really viable career path. I'm not sure that those kinds of programs are seen as viable career paths here.

MR. ALTMAN: And do you think there's an

opportunity to work with retraining programs in and around Charlotte in addition to looking at kids that are just getting out of high school and might enter that type of apprenticeship program you're talking about now? Because one of the focuses -- one of our focuses here today is displaced workers and others who need and can hopefully benefit from retraining.

MR. SPIEGEL: Right. I think one of the ideas is that the community college -- Central Piedmont that's putting this program together with us -- I think eventually the ideas as they expand that, they'll want to bring more people to it. Not just high school graduates, but people in the community who want that kind of training. Because that mechatronics degree in technology wouldn't just be good for Siemens, but there's a lot of technology plants that you'd be able to work in both in that area, but it'd be pretty fungible in other parts of the country.

And actually one of the things I did mention was we're having big success with veterans.

MR. ALTMAN: I saw that in the journal.

MR. SPIEGEL: We stuck with Ms. Obama’s and Dr. Jill Biden’s program called Joining Forces, and we at the time had about 3,500 open positions in the U.S. And we agreed to reserve 10 percent of those for veterans. We hit that target pretty quickly in a few months, and we’re now targeting 600 by the end of the year. One of the things we’re finding is that the military today is a pretty high-tech environment. They’re used to operating around a lot of technology and computers, especially people who are operating sophisticated equipment or communications technology and things. So they’ve got some pretty good on-the-ground training. They’re used to working in teams. They’re used to working under stress. They make very good service technicians and mechanical technicians and things.

But one of the things we had to find was we work with a company called Orion, which does the matching. Because when you look at the résumés of a lot of these people, there’s not a natural one-to-one fit. You don’t look at their résumés and say, oh, I see where this person could fit. So it takes some time to figure out what skills they really have and what skills we require in different parts of the country and then find a fit for those things. But it's amazing how quickly that's taken up and as I said, we quickly exceeded. And a lot of the people in our plants -- we have 137 manufacturing plants in the country. A lot of plant managers were quite excited to see a lot of people with these kinds of capabilities and skills that with a little bit of training, could come up to speed pretty quickly.

MR. ALTMAN: And tell us how you access the veterans, in other words how you actually get together with the veterans.

MR. SPIEGEL: We use a -- there's a placement firm that specializes in military hires. It's called Orion. There's other firms that I think do it, but they're very good at it. And they spend a lot of time with the individuals, understanding exactly what kind of capabilities, so it isn't just send people in for an interview. And I don't know how much of the soft skills and things they do as well, but there's probably some of that.

And then we have -- internally we have a training program, and we also do a big mentoring program. So other veterans in Siemens will mentor these people when they come onboard. So it's been a big success.

MR. ALTMAN: Well, we promised everyone we would finish at 1:00, so we have to be faithful to that. I want to thank Eric very much for being with us this afternoon.

And if I could make one closing comment, we really appreciate not just your being here today, but the points you made because what Siemens is doing and the relationship of technology and the workplace and the skills required to serve you, that's a really important issue in this country. And the good news is you've made a very large -- I mean, you're making very large investments in this country, and you're creating a lot of very attractive jobs. And so for a lot of people who think, well, there isn't going to be any more manufacturing in America, there may not be a lot more of the low-tech and low-skill manufacturing, but obviously when it comes to higher technology manufacturing, America is still a good place to be. So anyway, Eric, thank you very much.

MR. SPIEGEL: Thank you.

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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